

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 9100 LIQUID NEW
- **Article number:** 14655(L)
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Methyl Methacrylate

- **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 1)

Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves / eye protection / face protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Call a poison center/doctor if you feel unwell.
 Specific treatment (see on this label).
 Take off contaminated clothing and wash it before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

80-62-6	Methyl Methacrylate	>50-≤100%
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4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 2)

- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

All components have the value 17 ppm.

· **PAC-2:**

All components have the value 120 ppm.

· **PAC-3:**

All components have the value 570 ppm.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 3)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

80-62-6 Methyl Methacrylate

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Long-term value: 410 mg/m ³ , 100 ppm
TLV	Short-term value: 100 ppm Long-term value: 50 ppm
	DSEN, A4

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	101 °C (213.8 °F)

· **Flash point:** 10 °C (50 °F)· **Flammability (solid, gaseous):** Not flammable.· **Ignition temperature:** 430 °C (806 °F)· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

· Lower:	2.1 Vol %
· Upper:	12.5 Vol %

· **Vapor pressure at 20 °C (68 °F):** 47 hPa (35.3 mm Hg)· **Density at 20 °C (68 °F):** 0.94 g/cm³ (7.8443 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with**· **Water:** Not miscible or difficult to mix.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· Dynamic at 20 °C (68 °F):	1 mPas
· Kinematic:	Not determined.

· **Solvent content:**

· VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 5)

Solids content: 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

80-62-6 Methyl Methacrylate

Oral	LD50	7,872 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** No irritating effect.

· **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

All components have the value 3.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW



(Contd. of page 6)

- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|---|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1247 |
| · UN proper shipping name | |
| · DOT | Methyl methacrylate monomer, stabilized solution |
| · ADR | 1247 METHYL METHACRYLATE MONOMER, STABILIZED solution |
| · IMDG, IATA | METHYL METHACRYLATE MONOMER, STABILIZED solution |
| · Transport hazard class(es) | |
| · DOT | |
| |  |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| | |
| · ADR, IMDG, IATA | |
| |  |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Flammable liquids |
| · Hazard identification number (Kemler code): | 33 |
| · EMS Number: | F-E,S-D |
| · Stowage Category | C |

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 7)

· Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 8)

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

All components have the value E, NL.

· **TLV (Threshold Limit Value)**

All components have the value A4.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Methyl Methacrylate

· **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves / eye protection / face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

US

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 9)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:**

· **Date of preparation / last revision** 01/20/2022 / -

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

*OSHA: Occupational Safety **Health***

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 9100 LIQUID NEW
- **Article number:** 14655(L)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 1)

· **Hazard pictograms**

GHS02 GHS07

· **Signal word** *Danger*· **Hazard-determining components of labelling:***Methyl Methacrylate*· **Hazard statements***Highly flammable liquid and vapour.**Causes skin irritation.**May cause an allergic skin reaction.**May cause respiratory irritation.*· **Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Avoid breathing dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Contaminated work clothing should not be allowed out of the workplace.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**Call a POISON CENTER/doctor if you feel unwell.**Specific treatment (see on this label).**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**Wash contaminated clothing before reuse.**In case of fire: Use CO₂, powder or water spray for extinction.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

· **Chemical characterisation:** *Mixtures*· **Description:** *Mixture of substances listed below with nonhazardous additions.*· **Dangerous components:**

80-62-6	Methyl Methacrylate	>50-≤100%
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· **Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

AU

(Contd. on page 3)

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 2)

4 First Aid Measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 3)

- **Further information about storage conditions:**
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.
 Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

80-62-6 Methyl Methacrylate

WES	Short-term value: 416 mg/m ³ , 100 ppm
	Long-term value: 208 mg/m ³ , 50 ppm
	Sen

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Avoid contact with the skin.
 Avoid contact with the eyes and skin.
- **Respiratory protection:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

AU

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	101 °C

· **Flash point:** 10 °C· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** 430 °C· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· **Explosion limits:**

· Lower:	2.1 Vol %
· Upper:	12.5 Vol %

· **Vapour pressure at 20 °C:** 47 hPa

· Density at 20 °C:	0.94 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

· Dynamic at 20 °C:	1 mPas
· Kinematic:	Not determined.

· **Solvent content:**· **VOC (EC)** 0.00 %· **Solids content:** 0.0 %

(Contd. on page 6)

Safety Data Sheet according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 5)

· **Other information**

No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

80-62-6 Methyl Methacrylate

Oral LD50 7,872 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

-AU-

(Contd. on page 7)

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022


Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	UN1247
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG, IATA 	1247 METHYL METHACRYLATE MONOMER, STABILIZED solution METHYL METHACRYLATE MONOMER, STABILIZED solution
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code 	Warning: Flammable liquids. 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADG · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code 	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E

(Contd. on page 8)

AU

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 7)

<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>IL</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II</p>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Australian Inventory of Industrial Chemicals**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

All substances have the value S6, S10.

- **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Methyl Methacrylate

- **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

(Contd. on page 9)

Safety Data Sheet

according to WHS Regulations

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 8)

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO₂, powder or water spray for extinction.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:**
- **Abbreviations and acronyms:**
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*
 - IMDG: International Maritime Code for Dangerous Goods*
 - IATA: International Air Transport Association*
 - EINECS: European Inventory of Existing Commercial Chemical Substances*
 - ELINCS: European List of Notified Chemical Substances*
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)*
 - VOC: Volatile Organic Compounds (USA, EU)*
 - LC50: Lethal concentration, 50 percent*
 - LD50: Lethal dose, 50 percent*
 - PBT: Persistent, Bioaccumulative and Toxic*
 - vPvB: very Persistent and very Bioaccumulative*
 - Flam. Liq. 2: Flammable liquids – Category 2*
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2*
 - Skin Sens. 1: Skin sensitisation – Category 1*
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

AU

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

1 Identification

- **Product identifier**
- **Trade name:** TECHNOVIT 9100 LIQUID NEW
- **Article number:** 14655(L)
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2

H225 Highly flammable liquid and vapour.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -
Category 3

H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Methyl Methacrylate

- **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 1)

· **Precautionary statements**

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Ground and bond container and receiving equipment.
- Use explosion-proof [electrical/ventilating/lighting] equipment.
- Use non-sparking tools.
- Take actions to prevent static discharges.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor if you feel unwell.
- Specific treatment (see on this label).
- Take off contaminated clothing and wash it before reuse.
- If skin irritation or rash occurs: Get medical advice/attention.
- In case of fire: Use CO₂, powder or water spray to extinguish.
- Store in a well-ventilated place. Keep container tightly closed.
- Store in a well-ventilated place. Keep cool.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

80-62-6	Methyl Methacrylate	80-100% w/w *
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* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.

(Contd. on page 3)

Safety Data Sheet according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 2)

- **After swallowing:** *If symptoms persist consult doctor.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** *CO₂, sand, extinguishing powder. Do not use water.*
- **For safety reasons unsuitable extinguishing agents:** *Water with full jet*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents*
- **Reference to other sections**
*See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.*

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.*
- **Information about protection against explosions and fires:**
*Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *Store in a cool location.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:**
*Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.*
- **Specific end use(s)** *No further relevant information available.*

CA

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 3)

8 Exposure controls/ Personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

80-62-6 Methyl Methacrylate

EL STEL: 100 ppm

TWA: 50 ppm

S(D)

EV STEL: 100 ppm

TWA: 50 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

CA

(Contd. on page 5)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	101 °C
· Flash point:	10 °C
· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	430 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.1 Vol %
Upper:	12.5 Vol %
· Vapor pressure at 20 °C:	47 hPa
· Density at 20 °C:	0.94 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic at 20 °C:	1 mPas
Kinematic:	Not determined.
· Solvent content:	
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.

(Contd. on page 6)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 5)

- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

80-62-6 Methyl Methacrylate

Oral	LD50	7,872 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

All components have the value 3.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
 - **Persistence and degradability** No further relevant information available.
 - **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
 - **Additional ecological information:**
 - **General notes:**
- Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022



Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 6)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · DOT/TDG, ADR, IMDG, IATA	UN1247
· UN proper shipping name · DOT/TDG · ADR · IMDG, IATA	Methyl methacrylate monomer, stabilized solution 1247 METHYL METHACRYLATE MONOMER, STABILIZED solution METHYL METHACRYLATE MONOMER, STABILIZED solution
· Transport hazard class(es) · DOT/TDG (Transport dangerous goods):	
	
· Class · Label	3 Flammable liquids 3
· ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids 3
· Packing group · DOT/TDG, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT/TDG · Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

(Contd. on page 8)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 7)

· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Methyl Methacrylate

- **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

(Contd. on page 9)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 01/20/2022

Reviewed on 01/20/2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 8)

May cause an allergic skin reaction.

May cause respiratory irritation.

· Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Contact:

· Date of the latest revision of the safety data sheet 01/20/2022 / -

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** TECHNOVIT 9100 LIQUID NEW
- **Article number:** 14655(L)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Methyl Methacrylate

- **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**



(Contd. of page 1)

- **Precautionary statements**
 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - Use explosion-proof electrical/ventilating/lighting equipment.
 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - Store locked up.
 - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

80-62-6	Methyl Methacrylate	>50-≤100%
	 Flam. Liq. 2, H225;  Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **After inhalation:**
 - Supply fresh air and to be sure call for a doctor.
 - In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 2)

- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

80-62-6 Methyl Methacrylate	
OELV	Long-term value: 50 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 3)

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	101 °C

· **Flash point:** 10 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 430 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· Lower:	2.1 Vol %
· Upper:	12.5 Vol %

· **Vapour pressure at 20 °C:** 47 hPa

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 4)

· Density at 20 °C:	0.94 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	1 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

80-62-6 Methyl Methacrylate

Oral LD50 7,872 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**


(Contd. of page 5)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	UN1247
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA 	1247 METHYL METHACRYLATE MONOMER, STABILIZED solution METHYL METHACRYLATE MONOMER, STABILIZED solution
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code 	Warning: Flammable liquids. 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 6)

· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Methyl Methacrylate
- **Hazard statements**
Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Use explosion-proof electrical/ventilating/lighting equipment.
Avoid breathing dust/fume/gas/mist/vapours/spray.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*
- **Seveso category** *P5c FLAMMABLE LIQUIDS*
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** *5,000 t*
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** *50,000 t*

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 7)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

· **Contact:**

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** TECHNOVIT 9100 LIQUID NEW
- **Article number:** 14655(L)
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Methyl Methacrylate
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 1)

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 80-62-6	Methyl Methacrylate	>50-≤100%
EINECS: 201-297-1	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

5.3 Advice for firefighters

· **Protective equipment:** No special measures required.

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(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 2)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

80-62-6 Methyl Methacrylate

WEL	Short-term value: 416 mg/m ³ , 100 ppm
	Long-term value: 208 mg/m ³ , 50 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 3)

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	101 °C

- **Flash point:** 10 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 430 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

· Lower:	2.1 Vol %
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(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 4)

Upper:	12.5 Vol %
· Vapour pressure at 20 °C:	47 hPa
· Density at 20 °C:	0.94 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	1 mPas
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
Solids content:	0.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

80-62-6 Methyl Methacrylate

Oral	LD50	7,872 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 5)

- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.


SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1247 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1247 METHYL METHACRYLATE MONOMER, STABILIZED solution
METHYL METHACRYLATE MONOMER, STABILIZED solution |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label |
| | 3 Flammable liquids.
3 |

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: **TECHNOVIT 9100 LIQUID NEW**

(Contd. of page 6)

· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids. 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

(Contd. on page 8)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2022

Revision: 20.01.2022

Trade name: TECHNOVIT 9100 LIQUID NEW

(Contd. of page 7)

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

GB

化学品安全技术说明书

据根根据据根T 16483-2008, GB/T 17519-2013

打印日期 2022.01.20

在 2022.01.20 审核

1 化学品及企业标识

- **产品识别者**
- **化学品中文名称**、**化学品俗名或商品名**: TECHNOVIT 9100 LIQUID NEW
- **商品编号**: 14655(L)
- **相应纯物质或者混合物的相关下位用途及禁止用途** 无相关详细资料。
- **物质或混合物的用途** 实验室化学物
- **安全技术说明书内供应商详细信息**
- **企业名称**:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **可获取更多资料的部门**: Product safety department
- **紧急联系电话号码**:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危险性概述

- **紧急情况概述**:
无色的，流体，高度易燃液体和蒸气。造成皮肤刺激。可能导致皮肤过敏反应。可引起呼吸道刺激。

- **GHS危险性类别**



火焰

易燃液体 第2类

H225 高度易燃液体和蒸气



皮肤腐蚀/刺激 第2类

H315 造成皮肤刺激

敏化(皮肤) 第1类

H317 可能导致皮肤过敏反应

特定靶器官系统毒性(单次接触) 第3类 H335 可引起呼吸道刺激

- **标签要素**

- **GHS卷标要素** 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

- **象形图**



GHS02 GHS07

- **警示词** 危险

- **标签上辨别危险的成份**:

异丁烯酸甲酯 (>50-≤100 %)

- **危险性说明**

高度易燃液体和蒸气

造成皮肤刺激

可能导致皮肤过敏反应

(在 2 页继续)

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据根根据据根T 16483-2008, GB/T 17519-2013

打印日期 2022.01.20

在 2022.01.20 审核

化学品中文名称: 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

(在 1 页继续)

可引起呼吸道刺激

· 防范说明

· 预防措施

远离热源/火花/明火/热表面。禁止吸烟
使用防爆的电气/通风/照明/设备
避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾

· 应急措施

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴

贮存贮存贮存

存放处须加锁

处置处置处置

处置内装物/容器按照地方/区域/国家/国际规章

· 其他有害性

- PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果
- PBT(残留性、生物浓缩性、毒性物质) 不适用的
- vPvB(高残留性、高生物浓缩性物质): 不适用的

3 成分/组成信息

· 混合物

描述描述描述以下含有无害添加剂的成分组成的混合物

· 危险的成分:

80-62-6	异丁烯酸甲酯 Methyl Methacrylate	>50-≤100%
⚠ 易燃液体 第2类, H225; ⚠ 皮肤腐蚀/刺激 第2类, H315; 敏化(皮肤) 第1类, H317; 特定靶器官系统毒性 (单次接触) 第3类, H335		

4 急救措施

· 应急措施要领

吸入吸入吸入

供给新鲜空气并且确保会叫医生。
万一病人不清醒时,请让病人侧躺以便移动。

· 皮肤接触: 马上用水和肥皂进行彻底的冲洗。

· 眼睛接触: 张开眼睛在流水下冲洗数分钟。

食入食入食入如果症状仍然持续,请谘询医生。

· 给医生的资料:

- 最重要的急慢性症状及其影响 无相关详细资料。
- 需要及时的医疗处理及特别处理的症状 无相关详细资料。

5 消防措施

· 灭火方法

· 灭火的方法和灭火剂: 使用二氧化碳 (CO₂)、沙粒、灭火粉末. 切勿使用水。

· 为了安全,不适当的灭火剂会: 使用全喷嘴的水

· 特别危险性 无相关详细资料。

· 特殊灭火方法

· 消防人员特殊的防护装备: 没有要求特别的措施。

CN

(在 3 页继续)

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打印日期 2022.01.20

在 2022.01.20 审核

化学品中文名称: 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

(在 2 页继续)

6 泄漏应急处理

- **保护措施** 带上保护仪器. 让未受到保护的人们远离.
- **环境保护措施:** 切勿让其进入下水道/水面或地下水.
- **密封及净化方法和材料:**
吸收液体粘合原料 (沙粒、硅藻土、酸性粘合剂、通用粘合剂、锯屑).
确保有足够的通风装置.
切勿用水或水溶清洁剂来冲清.
- **参照其他部分**
有关安全处理的资料请参阅第 7 节.
有关个人防护装备的资料请参阅第 8 节.
有关弃置的资料请参阅第 13 节.

7 操作处置与储存

- **操作处置**
- **储存** 储存 储存 储存
确保工作间有良好的通风/排气装置.
防止气溶胶的形成.
- **有关火灾及防止爆炸的资料:**
远离火源 - 切勿吸烟.
防热.
防静电.
- **混合危险性等安全储存条件**
- **储存** 储存 储存 储存
· **储存库和容器须要达到的要求:** 储存在阴凉的位置.
· **有关使用一个普通的储存设施来储存的资料:** 不需要.
· **有关储存条件的更多资料:**
将容器密封.
储存密封的贮藏器内,并放在阴凉、干爽的位置.
免受接触热力和直接受阳光照射.
- **具体的最终用户** 无相关详细资料.

8 接触控制和个体防护

- **工程控制方法:** 没有进一步数据;见第 7 项.
 - **控制变数**
 - **在工作场需要监控的限值成分**
- | | |
|----------------|---|
| 80-62-6 异丁烯酸甲酯 | |
| OEL (CN) | PC-TWA: 100 mg/m ³
敏 |
| PEL (TW) | PC-TWA: 410 mg/m ³ , 100 ppm |
- **额外的资料:** 制作期间有效的清单将作为基础来使用.
 - **泄漏控制**
 - **个人防护设备:**
 - **一般保护和卫生措施:**
远离食品、饮料和饲料.
立即除去所有的不洁的和被污染的衣服.
在休息之前和工作完毕后请清洗双手.

(在 4 页继续)

化学品安全技术说明书

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打印日期 2022.01.20

在 2022.01.20 审核

化学品中文名称: 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

(在 3 页继续)

避免和皮肤接触.

避免和眼睛及皮肤接触.

· **呼吸系统防护:**

如果曾短暂接触或在低污染的情况下,请使用呼吸过滤装置. 如果曾深入或较长时间接触,请使用独立的呼吸保护装置.

· **手防护:**

保护手套

手套的物料必须是不渗透性的,且能抵抗该产品/物质/添加剂.

基于缺乏测试,对于产品/制剂/化学混合物,并不会提供手套材料的建议

选择手套材料时,请注意材料的渗透时间,渗透率和降解参数

· **手套材料**

选择合适的手套不单取决于材料,亦取决于质量特征,以及来自哪一间生产厂家,因为该产品是由很多材料配制而成. 手套材料的抵抗力并不可预计,所以,必须在使用之前进行检查

· **渗入手套材料的时间** 请向劳保手套生产厂家获取准确的破裂时间并观察实际的破裂时间· **眼睛防护:**

密封的护目镜

9 理化特性

· **有关基本物理及化学特性的信息**· **一般说明**

外观外观外观

形状形状形状

流体

颜色颜色颜色

无色的

气味气味气味

有特性的

· **嗅觉阈限**

未决定.

· **pH值:**

未决定.

· **条件的更改**

熔点熔点熔点

未确定的

沸点沸点沸点

沸点和沸程: 101 °C

闪点闪点闪点

10 °C

· **可燃性(固体、气体):** 不适用的· **点火温度:**

430 °C

· **分解温度:**

未决定.

· **自燃温度:**

该产品是不自燃的

· **爆炸的危险性:**

该产品并非爆炸性的然而有可能形成可爆炸性的空气/蒸汽混合物

· **爆炸极限:**

较低较低较低

2.1 Vol %

较高较高较高

12.5 Vol %

· **蒸气压 在 20 °C:**

47 hPa

(在 5 页继续)

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打印日期 2022.01.20

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化学品中文名称: 异丁烯酸甲酯
 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

(在 4 页继续)

密度密度密度0 °C: 0.94 g/cm³
 · 相对密度密度 未决定.
 · 蒸气密度 未决定.
 · 蒸发速率 未决定.

溶解性
 水: 不能拌和的或难以拌和

辛醇辛醇分配系数未决定.

· 黏性:
 动态动态黏度0 °C: 1 mPas
 运动黏度的学的 未决定.

· 溶剂成份:

固体成份: 0.0 %

· 其他信息 无相关详细资料。

10 稳定性和反应性

稳定性 无相关详细资料。

稳定稳定稳定

分解分解避免条件: 如果遵照规格使用则不会分解。

有害有害性质可能性 未有已知的危险反应。

避免避免条件 无相关详细资料。

· 不相容的物质: 无相关详细资料。

· 危险的分解产物: 未知有危险的分解产品。

11 毒理学信息

· 对毒性学影响的信息

· 急性毒性:

· 与分类相关的 LD/LC50 值:

80-62-6 异丁烯酸甲酯

口腔	LD50	7,872 mg/kg (rat)
----	------	-------------------

· 重要的刺激影响:

皮肤皮肤刺激皮肤和粘膜。

· 在眼睛上面: 没有刺激的影响。

致敏致敏作用通过皮肤接触可能造成敏化作用。

· 更多毒物的资料:

根据有关配制的一般欧盟分类指南的计算方法 (刊印在最新版本), 该产品显示以下的危险:
 刺激性的

12 生态学信息

· 毒害毒性毒性

· 水生毒性: 无相关详细资料。

持久性和降解性 无相关详细资料。

· 环境系统习性:

· 潜在的累积毒性 无相关详细资料。

(在 6 页继续)

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化学品中文名称/名称/名称/化学品俗名或商品名： TECHNIVIT 9100 LIQUID NEW

(在 5 页继续)

土壤土壤移动性相关详细资料。

· 额外的生态学资料:

· 总括注解:

水危害级别 1(德国规例) (通过名单进行自我评估): 对水是稍微危害的
不要让未稀释或大量的产品接触地下水、水道或者污水系统.

· PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果

· PBT(残留性、生物浓缩性、毒性物质) 不适用的

· vPvB(高残留性、高生物浓缩性物质): 不适用的

其他其他其他用用用相关详细资料。

13 废弃处置

废弃废弃处置方法

建议建议建议能将该产品和家居垃圾一起丢弃. 不要让该产品接触污水系统.

· 受污染的容器和包装:

建议建议建议须根据官方的规章来丢弃.

14 运输信息

联合国危险货物编号(UN号)

· ADR, IMDG, IATA UN1247

· UN适当装船名

· ADR 1247 单体丙烯酸甲酯, 稳定化的 溶液
· IMDG, IATA METHYL METHACRYLATE MONOMER,
STABILIZED solution

运输运输危险等级

· ADR, IMDG, IATA



· 级别 3 易燃液体

标签标签标签 3

· 包装组别

· ADR, IMDG, IATA II

· 环境危害

不适用的

· 用户特别预防措施

警告: 易燃液体

· 危险编码:

33

· 环境编码号码

F-E,S-D

· Stowage Category

C

· Stowage Code

SW1 Protected from sources of heat.
SW2 Clear of living quarters.

· MARPOL73/78(针对船舶引起的海洋污染预防协议)

附件附件附件根据根据C国际国际国际船舶货物编码) 大量大量
运送运送运送 不适用的

(在 7 页继续)

化学品安全技术说明书

据根据据据T 16483-2008, GB/T 17519-2013

打印日期 2022.01.20

在 2022.01.20 审核

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 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

(在 6 页继续)

运输运输运输的资料:

· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "标准规定":	UN 1247 单体丙烯酸甲酯, 稳定化的 溶液, 3, II

15 法规信息

- 对相应纯物质或者混合物的安全、保健及环境法规/法律 无相关详细资料。
- 危险化学品安全管理条例

· 危险化学品目录目录

所有组件的价值均为*。

- 化学品首次进口及有毒化学品进出口环境管理规定
- 新化学物质环境管理办法

· 国家环境有害物质名录

列出所有成分

- GHS卷标元素 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。
- 象形图



GHS02 GHS07

- 警示词 危险

· 标签上辨别危险的成份:

异丁烯酸甲酯 (>50-≤100 %)

· 危险性说明

高度易燃液体和蒸气
 造成皮肤刺激
 可能导致皮肤过敏反应
 可引起呼吸道刺激

· 防范说明

· 预防措施

远离热源/火花/明火/热表面。禁止吸烟
 使用防爆的电气/通风/照明/设备
 避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾

· 应急措施

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴

· 贮存

存放处须加锁

(在 8 页继续)

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在 2022.01.20 审核

化学品中文名称: 化学品俗名或商品名: TECHNIVIT 9100 LIQUID NEW

处置处置处置

(在 7 页继续)

处置内装物/容器按照地方/区域/国家/国际规章

· **化学物质安全性评价:** 尚未进行化学物质安全性评价

16 其他信息

该资料是基于我们目前的知识。然而,这并不构成对任何特定产品特性的担保并且不建立一个法律上有效的合同关系。

· 联络:

· 缩写:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累积性有毒物质

vPvB: very Persistent and very Bioaccumulative

易燃液体 第2类: Flammable liquids – Category 2

皮肤腐蚀/刺激 第2类: Skin corrosion/irritation – Category 2

敏化(皮肤) 第1类: Skin sensitisation – Category 1

特定靶器官系统毒性 (单次接触) 第3类: Specific target organ toxicity (single exposure) – Category 3

CN

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** TECHNOVIT 9100 LIQUID NEW
- **Artikelnummer:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- Aurion
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS02 vlam

Flam. Liq. 2 H225 Licht ontvlambare vloeistof en damp.



GHS07

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
Het product is geïdentificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: **TECHNOVIT 9100 LIQUID NEW**

(Vervolg van blz. 1)

· Gevarenpictogrammen



GHS02 GHS07

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

methylmethacrylaat

· Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.

H315 Veroorzaakt huidirritatie.

H317 Kan een allergische huidreactie veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

· Veiligheidsaanbevelingen

P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.

P241 Explosie veilige [elektrische/ventilatie-/verlichtings-]apparatuur gebruiken.

P261 Inademing van stof/rook/gas/nevel/damp/spuitnevel vermijden.

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen [of afdouchen].

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

· PBT: Niet bruikbaar.

· zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· 3.2 Chemische karakterisering: Mengsels

· Beschrijving: Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

· Gevaarlijke inhoudstoffen:

CAS: 80-62-6	methylmethacrylaat	>50-≤100%
EINECS: 201-297-1	⚠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· Na het inademen:

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.

· Na oogcontact: Ogen bij geopend ooglid meerdere minuten met stromend water spoelen

· Na inslikken: Als de klachten niet minderen, een arts raadplegen

· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: TECHNOVIT 9100 LIQUID NEW

(Vervolg van blz. 2)

- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**
Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** CO₂, zand, bluspoeder. Geen water gebruiken.
- **Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Krachtige waterstraal
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweertieners**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Voor voldoende ventilatie zorgen.
Niet met water of waterachtige reinigingsmiddelen wegspoelen.
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**
Onststekingsbronnen op afstand houden - niet roken.
Beschermen tegen hitte.
Maatregelen treffen tegen ontlading van statische elektriciteit.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**
Tanks ondoordringbaar gesloten houden.
Koel en droog bewaren in goed gesloten vaten.
Tegen hitte en directe zonnestrallen beschermen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **8.1 Controleparameters**
- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: TECHNOVIT 9100 LIQUID NEW

(Vervolg van blz. 3)

· **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

80-62-6 methylmethacrylaat

WGW Korte termijn waarde: 410 mg/m³, 100 ppm

Lange termijn waarde: 205 mg/m³, 50 ppm

· **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

· **8.2 Maatregelen ter beheersing van blootstelling**

· **Persoonlijke beschermingsvoorzieningen:**

· **Algemene beschermings- en gezondheidsmaatregelen:**

Verwijderd houden van eet- en drinkwaren.

Verontreinigde kleding onmiddellijk uittrekken.

Vóór de pauze en aan het einde van werktijd handen wassen.

Aanraking met de huid vermijden.

Aanraking met de ogen en de huid vermijden.

· **Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

· **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliën-mengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

· **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

· **Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

· **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· **9.1 Informatie over fysische en chemische basiseigenschappen**

· **Algemene gegevens**

· **Voorkomen:**

Vorm: Vloeibaar

Kleur: Kleurloos

· **Geur:** Karakteristiek

· **Geurdrempelwaarde:** Niet bepaald.

· **pH-waarde:** Niet bepaald.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: **TECHNOVIT 9100 LIQUID NEW**

(Vervolg van blz. 4)

· Toestandsverandering	
Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	101 °C
· Vlampunt:	10 °C
· Ontvlambaarheid (vast, gas):	Niet bruikbaar.
· Ontstekingstemperatuur:	430 °C
· Ontledingstemperatuur:	Niet bepaald.
· Zelfontbrandingstemperatuur:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingseigenschappen:	Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.
· Ontploffingsgrenzen:	
Onderste:	2,1 Vol %
Bovenste:	12,5 Vol %
· Dampspanning bij 20 °C:	47 hPa
· Dichtheid bij 20 °C:	0,94 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingssnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Niet resp. gering mengbaar.
· Verdelingscoëfficiënt: n-octanol/water:	Niet bepaald.
· Viscositeit	
Dynamisch bij 20 °C:	1 mPas
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
VOC (EG)	0,00 %
Gehalte aan vaste bestanddelen:	0,0 %
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: TECHNOVIT 9100 LIQUID NEW

(Vervolg van blz. 5)

· **Indelingsrelevantie LD/LC50-waarden:**

80-62-6 methylmethacrylaat

Oraal	LD50	7.872 mg/kg (rat)
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· **Primaire aandoening:**

· **Huidcorrosie/-irritatie**

Veroorzaakt huidirritatie.

· **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **Sensibilisatie van de luchtwegen/de huid**

Kan een allergische huidreactie veroorzaken.

· **Aanvullende toxicologische informatie:**

· **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**

· **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **STOT bij eenmalige blootstelling**

Kan irritatie van de luchtwegen veroorzaken.

· **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

· **12.1 Toxiciteit**

· **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.

· **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.

· **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.

· **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.

· **Verdere ecologische informatie:**

· **Algemene informatie:**

Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen

Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein

Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.

· **12.5 Resultaten van PBT- en zPzB-beoordeling**

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

· **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

· **13.1 Afvalverwerkingsmethoden**

· **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.

· **Niet gereinigde verpakkingen:**

· **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

· **14.1 VN-nummer**

· **ADR, IMDG, IATA**

UN1247

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: **TECHNOVIT 9100 LIQUID NEW**

(Vervolg van blz. 6)

<ul style="list-style-type: none"> · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN · ADR · IMDG, IATA 	<p>1247 METHYLMETHACRYLAAT, MONOMEER, GESTABILISEERD, Oplossing</p> <p>METHYL METHACRYLATE MONOMER, STABILIZED solution</p>
<ul style="list-style-type: none"> · 14.3 Transportgevaarenklasse(n) · ADR, IMDG, IATA 	
	
<ul style="list-style-type: none"> · klasse · Etiket 	<p>3 Brandbare vloeistoffen</p> <p>3</p>
<ul style="list-style-type: none"> · 14.4 Verpakkingsgroep: · ADR, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · 14.5 Milieugevaren: 	<p>Niet bruikbaar.</p>
<ul style="list-style-type: none"> · 14.6 Bijzondere voorzorgen voor de gebruiker · Gevaarsidentificatienummer (Kemler-getal): · EMS-nummer: · Stowage Category · Stowage Code 	<p>Waarschuwing: Brandbare vloeistoffen</p> <p>33</p> <p>F-E,S-D</p> <p>C</p> <p>SW1 Protected from sources of heat.</p> <p>SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code 	<p>Niet bruikbaar.</p>
<ul style="list-style-type: none"> · Transport/verdere gegevens: 	
<ul style="list-style-type: none"> · ADR · Beperkte hoeveelheden (LQ) · Uitgezonderde hoeveelheden (EQ) 	<p>1L</p> <p>Code: E2</p> <p>Grootste netto hoeveelheid per binnenverpakking: 30 ml</p> <p>Grootste netto hoeveelheid per buitenverpakking: 500 ml</p>
<ul style="list-style-type: none"> · Vervoerscategorie · Tunnelbeperkingscode 	<p>2</p> <p>D/E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · VN "Model Regulation": 	<p>UN 1247 METHYLMETHACRYLAAT, MONOMEER, GESTABILISEERD, OPLOSSING, 3, II</p>

RUBRIEK 15: Regelgeving

- 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel
 - SZW-lijst van kankerverwekkende stoffen
- geen der bestanddelen staat op de lijst.

(Vervolg op blz. 8)

NL

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: TECHNOVIT 9100 LIQUID NEW

(Vervolg van blz. 7)

· SZW-lijst van mutagene stoffen

geen der bestanddelen staat op de lijst.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid

geen der bestanddelen staat op de lijst.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling

geen der bestanddelen staat op de lijst.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding

geen der bestanddelen staat op de lijst.

· Lijst Zeer Zorgwekkende Stoffen (ZZS)

geen der bestanddelen staat op de lijst.

· Lijst van Potentieel Zeer Zorgwekkende Stoffen

geen der bestanddelen staat op de lijst.

· Richtlijn 2012/18/EU
· Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I geen der bestanddelen staat op de lijst.

· Seveso-categorie P5c ONTVLAMBARE VLOEISTOFFEN
· Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 5.000 t
· Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 50.000 t
· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3
· Richtlijn 2011/65/EU betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur - Bijlage II

geen der bestanddelen staat op de lijst.

· VERORDENING (EU) 2019/1148
· Bijlage I - PRECURSOREN VOOR EXPLOSIEVEN WAARVOOR EEN BEPERKING GELDT (Bovengrenswaarde ten behoeve van vergunningverlening op grond van artikel 5, lid 3)

geen der bestanddelen staat op de lijst.

· Bijlage II - PRECURSOREN VOOR EXPLOSIEVEN DIE MOETEN WORDEN GEMELD

geen der bestanddelen staat op de lijst.

· Verordening (EG) nr. 273/2004 inzake drugsprecursoren

geen der bestanddelen staat op de lijst.

· Verordening (EG) Nr. 111/2005 houdende voorschriften voor het toezicht op de handel tussen de Gemeenschap en derde landen in drugsprecursoren

geen der bestanddelen staat op de lijst.

· Nationale voorschriften:
· Gevaarklasse v. water: Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen

· 15.2 Chemischeveiligheidsbeoordeling: Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· Relevante zinnen

H225 Licht ontvlambare vloeistof en damp.

H315 Veroorzaakt huidirritatie.

H317 Kan een allergische huidreactie veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

(Vervolg op blz. 9)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.01.2022

Herziening van: 20.01.2022

Handelsnaam: TECHNOVIT 9100 LIQUID NEW

(Vervolg van blz. 8)

Afkortingen en acroniemen:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2

Skin Sens. 1: Sensibilisatie van de huid – Categorie 1

STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3

-NL-

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** TECHNOVIT 9100 LIQUID NEW
- **Code du produit:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Liquide et vapeurs très inflammables.



GHS07

Skin Irrit. 2 H315 Provoque une irritation cutanée.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

STOT SE 3 H335 Peut irriter les voies respiratoires.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS02 GHS07

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**
méthacrylate de méthyle
- **Mentions de danger**
H225 Liquide et vapeurs très inflammables.
H315 Provoque une irritation cutanée.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: TECHNOVIT 9100 LIQUID NEW

(suite de la page 1)

H317 Peut provoquer une allergie cutanée.

H335 Peut irriter les voies respiratoires.

· **Conseils de prudence**

P210 Tenir à l'écart de la chaleur, des surfaces chaudes, des étincelles, des flammes nues et de toute autre source d'inflammation. Ne pas fumer.

P241 Utiliser du matériel [électrique/de ventilation/d'éclairage] antidéflagrant.

P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.

P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau [ou se doucher].

P405 Garder sous clef.

P501 Éliminer le contenu/réceptacle conformément à la réglementation locale/régionale/nationale/internationale.

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· **3.2 Caractérisation chimique: Mélanges**

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

CAS: 80-62-6	méthacrylate de méthyle	>50-≤100%
EINECS: 201-297-1	⚠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Après inhalation:**

Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.

· **Après ingestion:** Si les troubles persistent, consulter un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:** CO₂, sable, poudre d'extinction. Ne pas utiliser d'eau.

· **Produits extincteurs déconseillés pour des raisons de sécurité:** Jet d'eau à grand débit

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: TECHNOVIT 9100 LIQUID NEW

(suite de la page 2)

- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).
Assurer une aération suffisante.
Ne pas rincer à l'eau ou aux produits nettoyants aqueux.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Veiller à une bonne ventilation/aspiration du poste de travail.
Éviter la formation d'aérosols.
- **Préventions des incendies et des explosions:**
Tenir à l'abri des sources d'inflammation - ne pas fumer.
Tenir à l'abri de la chaleur.
Prendre des mesures contre les charges électrostatiques.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**
Tenir les emballages hermétiquement fermés.
Stocker au frais et au sec dans des fûts bien fermés.
Protéger de la forte chaleur et du rayonnement direct du soleil.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **8.1 Paramètres de contrôle**
- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

80-62-6 méthacrylate de méthyle

VLEP	Valeur momentané: 410 mg/m ³ , 100 ppm
	Valeur à long terme: 205 mg/m ³ , 50 ppm

- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: TECHNOVIT 9100 LIQUID NEW

(suite de la page 3)

- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Eviter tout contact avec la peau.
Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

- **Matériau des gants**
Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.
- **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.
- **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

- **9.1 Informations sur les propriétés physiques et chimiques essentielles**
- **Indications générales**
- **Aspect:**

Forme:	Liquide
Couleur:	Incolore
Odeur:	Caractéristique
Seuil olfactif:	Non déterminé.
- **valeur du pH:** Non déterminé.
- **Changement d'état**

Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	101 °C
- **Point d'éclair** 10 °C
- **Inflammabilité (solide, gaz):** Non applicable.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: **TECHNOVIT 9100 LIQUID NEW**

(suite de la page 4)

· Température d'inflammation:	430 °C
· Température de décomposition:	Non déterminé.
· Température d'auto-inflammabilité:	Le produit ne s'enflamme pas spontanément.
· Propriétés explosives:	Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.
· Limites d'explosion:	
Inférieure:	2,1 Vol %
Supérieure:	12,5 Vol %
· Pression de vapeur à 20 °C:	47 hPa
· Densité à 20 °C:	0,94 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Pas ou peu miscible
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité:	
Dynamique à 20 °C:	1 mPas
Cinématique:	Non déterminé.
· Teneur en solvants:	
VOC (CE)	0,00 %
Teneur en substances solides:	0,0 %
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· Valeurs LD/LC50 déterminantes pour la classification:		
--	--	--

80-62-6 méthacrylate de méthyle		
--	--	--

Oral	LD50	7.872 mg/kg (rat)
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- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque une irritation cutanée.

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: TECHNOVIT 9100 LIQUID NEW

(suite de la page 5)

- **Lésions oculaires graves/irritation oculaire**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer une allergie cutanée.
- **Indications toxicologiques complémentaires:**
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Peut irriter les voies respiratoires.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

RUBRIQUE 14: Informations relatives au transport

- | | |
|--|---|
| · 14.1 Numéro ONU | |
| · ADR, IMDG, IATA | UN1247 |
| · 14.2 Désignation officielle de transport de l'ONU | |
| · ADR | 1247 MÉTHACRYLATE DE MÉTHYLE MONOMÈRE
STABILISÉ solution |

(suite page 7)

Fiche de données de sécurité


selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: **TECHNOVIT 9100 LIQUID NEW**

(suite de la page 6)

· IMDG, IATA	METHYL METHACRYLATE MONOMER, STABILIZED solution
· 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA	
	
· Classe · Étiquette	3 Liquides inflammables. 3
· 14.4 Groupe d'emballage · ADR, IMDG, IATA	II
· 14.5 Dangers pour l'environnement:	Non applicable.
· 14.6 Précautions particulières à prendre par l'utilisateur · Numéro d'identification du danger (Indice Kemler): · No EMS: · Stowage Category · Stowage Code	Attention: Liquides inflammables. 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR · Quantités limitées (LQ) · Quantités exceptées (EQ)	1L Code: E2 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 500 ml
· Catégorie de transport · Code de restriction en tunnels	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Règlement type" de l'ONU:	UN 1247 MÉTHACRYLATE DE MÉTHYLE MONOMÈRE STABILISÉ SOLUTION, 3, II

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **Catégorie SEVESO P5c LIQUIDES INFLAMMABLES**

(suite page 8)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.01.2022

Révision: 20.01.2022

Nom du produit: TECHNOVIT 9100 LIQUID NEW

(suite de la page 7)

- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 5.000 t
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 50.000 t
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII Conditions de limitation:** 3

· **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques – Annexe II**

Aucun des composants n'est compris.

· **RÈGLEMENT (UE) 2019/1148**

· **Annexe I - PRÉCURSEURS D'EXPLOSIFS FAISANT L'OBJET DE RESTRICTIONS (Valeur limite maximale aux fins de l'octroi d'une licence en vertu de l'article 5, paragraphe 3)**

Aucun des composants n'est compris.

· **Annexe II - PRÉCURSEURS D'EXPLOSIFS DEVANT FAIRE L'OBJET D'UN SIGNALLEMENT**

Aucun des composants n'est compris.

· **Règlement (CE) n° 273/2004 relatif aux précurseurs de drogues**

Aucun des composants n'est compris.

· **Règlement (CE) n° 111/2005 fixant des règles pour la surveillance du commerce des précurseurs des drogues entre la Communauté et les pays tiers**

Aucun des composants n'est compris.

· **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· **Phrases importantes**

H225 Liquide et vapeurs très inflammables.

H315 Provoque une irritation cutanée.

H317 Peut provoquer une allergie cutanée.

H335 Peut irriter les voies respiratoires.

· **Acronymes et abréviations:**

ADR: Accord relatif au transport international des marchandises dangereuses par route

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquides inflammables – Catégorie 2

Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2

Skin Sens. 1: Sensibilisation cutanée – Catégorie 1

STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** TECHNOVIT 9100 LIQUID NEW
- **Artikelnummer:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches Laborchemikalien**
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunfteibereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Flüssigkeit und Dampf leicht entzündbar.



GHS07

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: **TECHNOVIT 9100 LIQUID NEW**

(Fortsetzung von Seite 1)

· **Gefahrenpiktogramme**

GHS02 GHS07

· **Signalwort Gefahr**· **Gefahrbestimmende Komponenten zur Etikettierung:**

Methyl-methacrylat

· **Gefahrenhinweise**

H225 Flüssigkeit und Dampf leicht entzündbar.

H315 Verursacht Hautreizungen.

H317 Kann allergische Hautreaktionen verursachen.

H335 Kann die Atemwege reizen.

· **Sicherheitshinweise**

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.

P241 Explosionsgeschützte [elektrische/Lüftungs-/Beleuchtungs-] Geräte verwenden.

P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen [oder duschen].

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· **2.3 Sonstige Gefahren**· **Ergebnisse der PBT- und vPvB-Beurteilung**· **PBT:** Nicht anwendbar.· **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· **3.2 Chemische Charakterisierung: Gemische**· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.· **Gefährliche Inhaltsstoffe:**

CAS: 80-62-6	Methyl-methacrylat	>50-≤100%
EINECS: 201-297-1	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**· **Nach Einatmen:**

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

· **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.· **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.· **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.· **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: TECHNOVIT 9100 LIQUID NEW

(Fortsetzung von Seite 2)

- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**
Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:** CO₂, Sand, Löschpulver. Kein Wasser verwenden.
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser im Vollstrahl
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
Für ausreichende Lüftung sorgen.
Nicht mit Wasser oder wässrigen Reinigungsmitteln wegspülen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**
Behälter dicht geschlossen halten.
In gut verschlossenen Gebinden kühl und trocken lagern.
Vor Hitze und direkter Sonnenbestrahlung schützen.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

DE

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: **TECHNOVIT 9100 LIQUID NEW**

(Fortsetzung von Seite 3)

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **8.1 Zu überwachende Parameter**
- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

80-62-6 Methyl-methacrylat

AGW	Langzeitwert: 210 mg/m ³ , 50 ml/m ³ 2(I);DFG, EU, Y
-----	---

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

8.2 Begrenzung und Überwachung der Exposition

· **Persönliche Schutzausrüstung:**

· **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

Berührung mit der Haut vermeiden.

Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

DE

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: **TECHNOVIT 9100 LIQUID NEW**

(Fortsetzung von Seite 4)

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

· Form:	Flüssig
· Farbe:	Farblos
· Geruch:	Charakteristisch
· Geruchsschwelle:	Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· Zustandsänderung

· Schmelzpunkt/Gefrierpunkt:	Nicht bestimmt.
· Siedebeginn und Siedebereich:	101 °C

· **Flammpunkt:** 10 °C

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zündtemperatur:** 430 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.

· **Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.

· Explosionsgrenzen:

· Untere:	2,1 Vol %
· Obere:	12,5 Vol %

· **Dampfdruck bei 20 °C:** 47 hPa

· **Dichte bei 20 °C:** 0,94 g/cm³

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

· **Wasser:** Nicht bzw. wenig mischbar.

· **Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.

· Viskosität:

· Dynamisch bei 20 °C:	1 mPas
· Kinematisch:	Nicht bestimmt.

· Lösemittelgehalt:

· **VOC (EU)** 0,00 %

· **Festkörpergehalt:** 0,0 %

· **9.2 Sonstige Angaben** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

· **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: TECHNOVIT 9100 LIQUID NEW

(Fortsetzung von Seite 5)

- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

· **Einstufungsrelevante LD/LC50-Werte:**

80-62-6 Methyl-methacrylat

Oral	LD50	7.872 mg/kg (rat)
------	------	-------------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut**
Kann allergische Hautreaktionen verursachen.
- **Zusätzliche toxikologische Hinweise:**
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Kann die Atemwege reizen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

DE

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022


Handelsname: **TECHNOVIT 9100 LIQUID NEW**

(Fortsetzung von Seite 6)

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

ABSCHNITT 14: Angaben zum Transport

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | UN1247 |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG, IATA | 1247 METHYLMETHACRYLAT, MONOMER, STABILISIERT, Lösung
METHYL METHACRYLATE MONOMER, STABILIZED solution |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Klasse · Gefahrzettel |
| <ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA | 3 Entzündbare flüssige Stoffe
3
II |
| <ul style="list-style-type: none"> · 14.5 Umweltgefahren: | Nicht anwendbar. |
| <ul style="list-style-type: none"> · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl): · EMS-Nummer: · Stowage Category · Stowage Code | Achtung: Entzündbare flüssige Stoffe
33
F-E,S-D
C
SW1 Protected from sources of heat.
SW2 Clear of living quarters. |
| <ul style="list-style-type: none"> · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code | Nicht anwendbar. |
| <ul style="list-style-type: none"> · Transport/weitere Angaben: | |
| <ul style="list-style-type: none"> · ADR · Begrenzte Menge (LQ) · Freigestellte Mengen (EQ) · Beförderungskategorie · Tunnelbeschränkungscode | IL
Code: E2
Höchste Nettomenge je Innenverpackung: 30 ml
Höchste Nettomenge je Außenverpackung: 500 ml
2
D/E |

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: TECHNOVIT 9100 LIQUID NEW

(Fortsetzung von Seite 7)

<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 1247 METHYLMETHACRYLAT, MONOMER, STABILISIERT, LÖSUNG, 3, II</p>

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Seveso-Kategorie P5c ENTZÜNDBARE FLÜSSIGKEITEN**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 5.000 t
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 50.000 t
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3
- **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**
Keiner der Inhaltsstoffe ist enthalten.
- **VERORDNUNG (EU) 2019/1148**
- **Anhang I - BESCHRÄNKTE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE (Oberer Konzentrationsgrenzwert für eine Genehmigung nach Artikel 5 Absatz 3)**
Keiner der Inhaltsstoffe ist enthalten.
- **Anhang II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE**
Keiner der Inhaltsstoffe ist enthalten.
- **Verordnung (EG) Nr. 273/2004 betreffend Drogenausgangsstoffe**
Keiner der Inhaltsstoffe ist enthalten.
- **Verordnung (EG) Nr. 111/2005 zur Festlegung von Vorschriften für die Überwachung des Handels mit Drogenaustauschstoffen zwischen der Gemeinschaft und Drittländern**
Keiner der Inhaltsstoffe ist enthalten.
- **Nationale Vorschriften:**
- **Wassergefährdungsklasse: WGK I (Selbsteinstufung):** schwach wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**
- H225 Flüssigkeit und Dampf leicht entzündbar.
- H315 Verursacht Hautreizungen.
- H317 Kann allergische Hautreaktionen verursachen.
- H335 Kann die Atemwege reizen.

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.01.2022

überarbeitet am: 20.01.2022

Handelsname: TECHNOVIT 9100 LIQUID NEW

(Fortsetzung von Seite 8)

· Abkürzungen und Akronyme:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2

Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3

-DE-

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** TECHNOVIT 9100 LIQUID NEW
- **Articolo numero:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**
Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Società Italiana Chimici**
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

Flam. Liq. 2 H225 Liquido e vapori facilmente infiammabili.



GHS07

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

STOT SE 3 H335 Può irritare le vie respiratorie.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

(continua a pagina 2)

Scheda di dati di sicurezza

ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 1)

Pittogrammi di pericolo


GHS02 GHS07

Avvertenza Pericolo
Componenti pericolosi che ne determinano l'etichettatura:

metacrilato di metile

Indicazioni di pericolo

H225 Liquido e vapori facilmente infiammabili.

H315 Provoca irritazione cutanea.

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

Consigli di prudenza

P210 Tenere lontano da fonti di calore, superfici riscaldate, scintille, fiamme e altre fonti di innesco. Vietato fumare.

P241 Utilizzare impianti [elettrici/di ventilazione/d'illuminazione] a prova di esplosione.

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliersi di dosso immediatamente tutti gli indumenti contaminati. Sciacquare la pelle [o fare una doccia].

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

2.3 Altri pericoli
Risultati della valutazione PBT e vPvB

PBT: Non applicabile.

vPvB: Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

3.2 Caratteristiche chimiche: Miscela

Descrizione: Miscela delle seguenti sostanze con additivi non pericolosi.

Sostanze pericolose:

CAS: 80-62-6	metacrilato di metile	>50-≤100%
EINECS: 201-297-1		

Ulteriori indicazioni: Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

4.1 Descrizione delle misure di primo soccorso
Inalazione:

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

Contatto con la pelle: Lavare immediatamente con acqua e sapone sciacquando accuratamente.

Contatto con gli occhi: Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.

Ingestione: Se il dolore persiste consultare il medico.

4.2 Principali sintomi ed effetti, sia acuti che ritardati Non sono disponibili altre informazioni.

(continua a pagina 3)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 2)

- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** CO2, sabbia, polvere. Non usare acqua.
- **Mezzi di estinzione inadatti per motivi di sicurezza:** Getti d'acqua
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
Provvedere ad una sufficiente areazione.
Non dilavare con acqua o detergenti liquidi.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:**
Tenere lontano da fonti di calore, non fumare.
Proteggere dal calore.
Adottare provvedimenti contro cariche elettrostatiche.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Conservare in luogo fresco e asciutto in fusti ben chiusi.
Proteggere dal calore e dai raggi diretti del sole.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **8.1 Parametri di controllo**
- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

(continua a pagina 4)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 3)

Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**80-62-6 metacrilato di metile**

TWA	Valore a breve termine: 410 mg/m ³ , 100 ppm Valore a lungo termine: 205 mg/m ³ , 50 ppm sen, A4
VL	Valore a breve termine: 100 ppm Valore a lungo termine: 50 ppm

· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

· **8.2 Controlli dell'esposizione**· **Mezzi protettivi individuali:**· **Norme generali protettive e di igiene del lavoro:**

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Evitare il contatto con la pelle.
- Evitare il contatto con gli occhi e la pelle.

· **Maschera protettiva:**

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

· **Guanti protettivi:**

Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

· **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· **Occhiali protettivi:**

Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**· **Indicazioni generali**· **Aspetto:**

Forma: Liquido

Colore: Incolore

· **Odore:** Caratteristico

(continua a pagina 5)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 4)

· Soglia olfattiva:	Non definito.
· valori di pH:	Non definito.
· Cambiamento di stato	
Punto di fusione/punto di congelamento:	Non definito.
Punto di ebollizione iniziale e intervallo di ebollizione:	101 °C
· Punto di infiammabilità:	10 °C
· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di accensione:	430 °C
· Temperatura di decomposizione:	Non definito.
· Temperatura di autoaccensione:	Prodotto non autoinfiammabile.
· Proprietà esplosive:	Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.
· Limiti di infiammabilità:	
Inferiore:	2,1 Vol %
Superiore:	12,5 Vol %
· Tensione di vapore a 20 °C:	47 hPa
· Densità a 20 °C:	0,94 g/cm ³
· Densità relativa	Non definito.
· Densità di vapore:	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Poco e/o non miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
Dinamica a 20 °C:	1 mPas
Cinematica:	Non definito.
· Tenore del solvente:	
VOC (CE)	0,00 %
Contenuto solido:	0,0 %
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- 10.1 Reattività Non sono disponibili altre informazioni.
- 10.2 Stabilità chimica
- Decomposizione termica/ condizioni da evitare: Il prodotto non si decompone se utilizzato secondo le norme.
- 10.3 Possibilità di reazioni pericolose Non sono note reazioni pericolose.
- 10.4 Condizioni da evitare Non sono disponibili altre informazioni.
- 10.5 Materiali incompatibili: Non sono disponibili altre informazioni.
- 10.6 Prodotti di decomposizione pericolosi: Non sono noti prodotti di decomposizione pericolosi.

(continua a pagina 6)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: **TECHNOVIT 9100 LIQUID NEW**

(Segue da pagina 5)

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

- **Valori LD/LC50 rilevanti per la classificazione:**

80-62-6 metacrilato di metile

Orale	LD50	7.872 mg/kg (rat)
-------	------	-------------------

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare una reazione allergica cutanea.
- **Ulteriori dati tossicologici:**
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Può irritare le vie respiratorie.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.

(continua a pagina 7)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 6)

- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

SEZIONE 14: Informazioni sul trasporto

- **14.1 Numero ONU**
- **ADR, IMDG, IATA**

UN1247

- **14.2 Nome di spedizione dell'ONU**
- **ADR**

1247 METACRILATO DI METILE MONOMERO
STABILIZZATO soluzione
METHYL METHACRYLATE MONOMER, STABILIZED
solution

- **14.3 Classi di pericolo connesso al trasporto**
- **ADR, IMDG, IATA**



- **Classe**
- **Etichetta**

3 Liquidi infiammabili
3

- **14.4 Gruppo di imballaggio**
- **ADR, IMDG, IATA**

II

- **14.5 Pericoli per l'ambiente:**

Non applicabile.

- **14.6 Precauzioni speciali per gli utilizzatori**
- **N° identificazione pericolo (Numero Kemler):**
- **Numero EMS:**
- **Stowage Category**
- **Stowage Code**

Attenzione: Liquidi infiammabili
33
F-E,S-D
C
SW1 Protected from sources of heat.
SW2 Clear of living quarters.

- **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC**

Non applicabile.

- **Trasporto/ulteriori indicazioni:**

- **ADR**
- **Quantità limitate (LQ)**
- **Quantità esenti (EQ)**

1L
Codice: E2
Quantità massima netta per imballaggio interno: 30 ml
Quantità massima netta per imballaggio esterno: 500 ml

- **Categoria di trasporto**
- **Codice di restrizione in galleria**

2
D/E

- **IMDG**
- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

1L
Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

(continua a pagina 8)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 7)

· **UN "Model Regulation":** UN 1247 METACRILATO DI METILE MONOMERO STABILIZZATO SOLUZIONE, 3, II

SEZIONE 15: Informazioni sulla regolamentazione

· **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**

- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **Categoria Seveso P5c** LIQUIDI INFIAMMABILI
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore** 5.000 t
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore** 50.000 t
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3

· **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**

Nessuno dei componenti è contenuto.

· **REGOLAMENTO (UE) 2019/1148**

· **Allegato I - PRECURSORI DI ESPLOSIVI SOGGETTI A RESTRIZIONI (Valore limite superiore ai fini della concessione di licenze a norma dell'articolo 5, paragrafo 3)**

Nessuno dei componenti è contenuto.

· **Allegato II - PRECURSORI DI ESPLOSIVI SOGGETTI A SEGNALAZIONE**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) n. 273/2004 relativo ai precursori di droghe**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) N. 111/2005 recante norme per il controllo del commercio dei precursori di droghe tra la Comunità e i paesi terzi**

Nessuno dei componenti è contenuto.

· **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Fraasi rilevanti**

H225 Liquido e vapori facilmente infiammabili.

H315 Provoca irritazione cutanea.

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

· **Abbreviazioni e acronimi:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

(continua a pagina 9)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 20.01.2022

Revisione: 20.01.2022

Denominazione commerciale: TECHNOVIT 9100 LIQUID NEW

(Segue da pagina 8)

*PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Liquidi infiammabili – Categoria 2**Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2**Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1**STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3*

IT

1 화학제품과 회사에 관한 정보

제품제품제명

· 제품명: TECHNOVIT 9100 LIQUID NEW

· 상품번호: 14655(L)

해당 해당 화학물질이나 혼합물/액체 관련 위험도 및 사용금지용도

· 제품의 권고 용도와 사용 용도에 대한 제한사항 TECHNOVIT 9100 LIQUID NEW

· 제품의 권고 용도와 사용 용도에 대한 제한사항 시험실 화학품

· 안전데이터표(Safety Data Sheet)내 공급업체 관련 경고사항 정보

· 제조자/수입자/유통업체 정보정보

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298

Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com

· 추가적인 정보: 특정 위험 회동 가능 product safety department

· 비상연락 전화번호:

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

· 순물질 또는 혼합물/액체 분류분류



화염

인화성 액체 - 구분2

H225 고인화성 액체 및 증기



피부 부식성/피부 자극성 - 구분2

H315 피부에 자극을 일으킴

피부 과민성은 - 구분1

H317 알레르기성 피부 반응을 일으킬 수 있음

특정표적장기 독성 - 1회 노출 - 구분3

H335 호흡기 자극을 일으킬 수 있음

· 라벨 표기 요소요소

· 라벨 라벨 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(2 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(1 쪽부터계속)

· GHS 그림문자



GHS02 GHS07

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

Methyl Methacrylate

유해유해위험문구

- 고인화성 액체 및 증기
- 피부에 자극을 일으킴
- 알레르기성 피부 반응을 일으킬 수 있음
- 호흡기 자극을 일으킬 수 있음

· 예방조치문구

- 열·스파크·화염·고열로부터 멀리하십시오 - 금연
- 폭발 방지용 전기·환기·조명·장비를 사용하십시오.
- 분진·흙·가스·미스트·증기·스프레이의 흡입을 피하십시오.
- 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으십시오/샤워하십시오

· 밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

기타기타위험성

- PBT(잔류성, 생물농축성, 물생분해성) 및 vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있는 결과
- PBT(잔류성, 생물농축성, 물생분해성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성) 물질이 포함되어 있는 당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

설명설명설명 설명한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소요소

80-62-6	Methyl Methacrylate	>50-≤100%
	⚠ 인화성 액체 - 구분2, H225; ⚠ 피부 부식성/피부 자극성 - 구분2, H315; 피부 과민성은 - 구분1, H317; 특정표적장기 독성 - 1회 노출 - 구분3, H335	

4 응급조치 요령

· 응급조치요령 내용내용

· 흡입했을 때:

- 신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.
- 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· 피부에 접촉했을 때: 즉시물과비누로씻고잘행군다.

· 눈에 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어낸다.

· 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.

기타기타위험성의 주의사항:

가장가장중요한정보는MSDS(물질안전보건자료)에 포함되어 있는 정보가 존재하지 않습니다.

- 즉각적인 의료처리 및 특별치료가 필요함을 시사하는 징후 중 구체적인 정보가 존재하지 않습니다.

KR

(3 쪽에계속)

물질안전보건자료 GHS에 따라 라다

인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(3 쪽부터 계속)

통제 조치 및 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

80-62-6 Methyl Methacrylate

OELV (KR)	단기간의값: 100 ppm 장기간의값: 50 ppm
IOELV (EU)	단기간의값: 100 ppm 장기간의값: 50 ppm
PEL (US)	장기간의값: 410 mg/m ³ , 100 ppm
REL (US)	장기간의값: 410 mg/m ³ , 100 ppm
TLV (US)	단기간의값: 100 ppm 장기간의값: 50 ppm DSEN, A4

· 추가 정보 정보 조할 당시에 유효한 목록을 기초로 사용했다.

노출 통제 및 통제 조치

개인 개인 보호구

· 일반적 보호 조치 및 위생 조치:

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음식물 수분이 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날 때마다 손을 씻는다.
- 피부와의 접촉을 피한다.
- 눈과 피부와의 접촉을 피한다.

· 호흡기 보호 보호

· 단시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡 보호 장비를 사용한다.

보수 보호 보호



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다. 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다. 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· 장갑 의 재료

· 적합한 장갑 의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크 되어져야 한다.

· 장갑 재료의 투과 시간 정확한 관통 시간은 보호 장갑 제조자에 의하여 인지도되고, 준수 되어야 한다.

보수 보호 보호



팩조이는 보안경

KR

(5 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(4 쪽부터계속)

9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형외형의형	액체의
· 물량계상 상태	색소가 없는
· 색:	특색있는
냄새냄새냄새	알맞지않다.
· 후각역치	
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	맞지않는
초기초기 녹는 점과 끓는점범위범위	101 °C
· 인화점:	10 °C
· 인화성고체고체기체	해당사항 없음.
· 점화온도:	430 °C
분해온도	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.
인화 인화 인화 폭발 위험성 상한선 하한	
· 아래로:	2.1 Vol %
위로위로위로	12.5 Vol %
· 증기압 의경우 20 °C:	47 hPa
밀도 밀도 밀도 의경우 20 °C:	0.94 g/cm ³
비중 비중 비중	알맞지않다.
· 증기밀도:	알맞지않다.
증발 증발 증발 속도	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는 거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
점도 점도 점도	
· 역학성 의경우 20 °C:	1 mPas
· 동점성:	알맞지않다.
· 용매내용물	
· VOC (EU)	0.00 %
· 고체양함량함량	0.0 %
기타 정보 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 유해 반응의 가능성 / 피해 예방 조건 조건에 따라 사용할 경우 해체는 없다

(6 쪽에계속)

물질안전보건자료 GHS에 따라라다

인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(5 쪽부터 계속)

- **유해반응 가능성** 위험한 반응으로는 알려지지 않았다.
- **피해 예방 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 위험** 혼합물 자체에 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성 있는 분해물들은 알려지지 않았다.

11 독성에 관한 정보

· **독성학적 영향에 대한 정보**
급성독성, 독성독성

· LD/LC50-수 체에 따른 분류
80-62-6 Methyl Methacrylate
구강의 LD50 7,872 mg/kg (rat)

- **일차적 자극 효과**
피부: 피부 자극 또는 자극성: 피부와 점막을 자극한다.
심한 심한 자극 또는 자극성: 무자극.
- **감각화:** 피부 접촉을 통하여 감각화가 가능하다.

· **추가적인 독성에 관한 정보**
이제 품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들의 사전 준비에 대하여 제시하고 있다.
자극적인

12 환경에 미치는 영향

독성독성독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보**

일반 열안정성 특징

- 수질오염등급 1 (자체등급분류): 약하게 수질오염이 된 희석시키지 않은 채 대량으로 지하수나, 하천으로 그리고 하수도망에도 도달하지 않게 한다.
- PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성 물질)에 해당하지 않음.
- PBT(잔류성, 생물농축성, 독성물질)에 해당하지 않음.
- vPvB(고 잔류성, 고 생물농축성 물질)에 해당하지 않음.
- 기타 기타 **부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
권고 권고 **생물** 쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.
- **비위생적 포장 포장**
권고 권고 **생물** 의지침에 입각한 쓰레기 처리.

물질안전보건자료

GHS에 따라


인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(6 쪽부터 계속)

14 운송에 필요한 정보

유엔 유엔번호 · ADR, IMDG, IATA	UN1247
적정적정정정명 · ADR · IMDG, IATA	1247 METHYL METHACRYLATE MONOMER, STABILIZED solution METHYL METHACRYLATE MONOMER, STABILIZED solution
교통 교통교통 · ADR, IMDG, IATA	
	
등급 등급 등급 · 위험 라벨라벨	3 발화성용액 3
용기 등급 · ADR, IMDG, IATA	II
환경적 유해물질:	해당사항 없음.
이동 특별 특별 조치 위험 위험 위험 코드 · E 번호 번호 · Stowage Category · Stowage Code	경고: 발화성용액 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크 벌크 운송 운송	해당사항 없음.
운송 추가 정보 · ADR	
한정 한정 한정 (수량) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
운송 운송 운송 구분 터널 터널 터널 코드	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN 번호 번호 번호	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

KR

(8 쪽에 계속)

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제품명: TECHNOVIT 9100 LIQUID NEW

(7 쪽부터 계속)

15 법적 규제현황

· 산업안전보건법에 의해 규제

제조제조금지물질:

어떠한내용물도 목록화되어있지않다

· 허가대상물질:

어떠한내용물도 목록화되어있지않다

· 관리대상유해물질:

어떠한내용물도 목록화되어있지않다

· 작업환경측정 대상 유해인자

어떠한내용물도 목록화되어있지않다

· 특수건강 집광 대상 유해인자

어떠한내용물도 목록화되어있지않다

해당 해당 수물질 또는 혼합 물에 대한 유해인자 측정 관련 규제를 법률적인 정보가 존재하지 않습니다.

· Korean Existing Chemical Inventory

80-62-6 Methyl Methacrylate

KE-25050

· 화학물질관리법

· 사고대비물질

어떠한내용물도 목록화되어있지않다

· 금지물질

어떠한내용물도 목록화되어있지않다

· 제한물질

어떠한내용물도 목록화되어있지않다

· 유독물질

어떠한내용물도 목록화되어있지않다

· 허가물질

어떠한내용물도 목록화되어있지않다

· 위험물안전관리법 (위험물 및 지정수량) 제 4: 200 리터

등록등록번호로 선제대상 화학물질

어떠한내용물도 목록화되어있지않다

· '21년까지 등록하여야 할 압, 들언번이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질

어떠한내용물도 목록화되어있지않다

· 중점관리물질(양) 지정지정

· 표1 중점관리물질(재관전)관련관련

어떠한내용물도 목록화되어있지않다

· 표2 중점관리물질(재관전)관련관련

어떠한내용물도 목록화되어있지않다

· GHS 라벨링 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(9 쪽에 계속)

물질안전보건자료 GHS에 따라라따

인쇄일자: 2022.01.20

개정: 2022.01.20

제품명: TECHNOVIT 9100 LIQUID NEW

(8 쪽부터계속)

· GHS 그림문자



GHS02 GHS07

· 신호어 위험

· **상표상에명확히위험성이표시된성분:**

Methyl Methacrylate

유해유해위험문구

- 고인화성 액체 및 증기
- 피부에 자극을 일으킴
- 알레르기성 피부 반응을 일으킬 수 있음
- 호흡기 자극을 일으킬 수 있음

· **예방조치문구**

- 열·스파크·화염·고열로부터 멀리하십시오 - 금연
- 폭발 방지용 전기·환기·조명·장비를 사용하십시오.
- 분진·흄·가스·미스트·증기·스프레이의 흡입을 피하십시오.
- 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오

· 밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

· **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **담당자:**

최초최초작성일자: 2022.01.20

개정개정개정개정 개정 최종 개정일자: 1 / 2022.01.20

· **약어와 두문자어:**

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** TECHNOVIT 9100 LIQUID NEW
- **Nombor artikel:** 14655(L)
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiada maklumat lanjut yang diperolehi.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Maklumat lanjut dapat diperolehi daripada:** Product safety department
- **Nombor telefon kecemasan:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Pengenalan bahaya

- **Pengelasan bahan atau campuran**



Nyalaan

Cec. M. Bkr 2 H225 Cecair dan wap amat mudah terbakar.



Kreng. Kulit 2 H315 Menyebabkan kerengsaan kulit.

Pem. Kulit 1 H317 Boleh menyebabkan tindak balas alahan kulit.

STOT SE 3 H335 Boleh menyebabkan kerengsaan pernafasan.

- **Melabelkan unsur**
- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram bahaya**



GHS02



GHS07

- **Kata isyarat Bahaya**
- **Komponen pelabelan yang menentukan bahaya:**
metil 2-metilpropenoat
- **Pernyataan Bahaya**
Cecair dan wap amat mudah terbakar.
Menyebabkan kerengsaan kulit.
Boleh menyebabkan tindak balas alahan kulit.
Boleh menyebabkan kerengsaan pernafasan.

(Bersambung ke halaman 2)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 1)

· **Pernyataan Berjaga-jaga**

Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.

Gunakan kelengkapan elektrik/pengalihudaraan/pencahayaan yang tahan letupan.

Elakkan daripada tersedut habuk/wasap/gas/kabus/wap/semburan.

JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.

Simpan di tempat berunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

· **Bahaya lain**

· **Keputusan penilaian PBT dan vPvB**

· **PBT:** Tidak berkenaan

· **vPvB:** Tidak berkenaan

3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

· **Ciri kimia: Campuran**

· **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

· **Komponen berbahaya :**

80-62-6	metil 2-metilpropenoat	>50-≤100%
	⚠ Cec. M. Bkr 2, H225; ⚠ Kreng. Kulit 2, H315; Pem. Kulit 1, H317; STOT SE 3, H335	

4 Langkah-langkah pertolongan cemas

· **Keterangan langkah pertolongan cemas**

· **Jika tersedut:**

Berikan udara bersih dan pastikan rawatan doktor diperoleh.

Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.

· **Jika terkena kulit:** Segera basuh dengan air dan sabun serta bilas bersih-bersih.

· **Jika terkena mata:** Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit.

· **Jika tertelan:** Jika gejala berterusan, hubungi doktor.

· **Maklumat untuk doktor:**

· **Gejala dan kesan paling penting, akut dan lewat** Tiadak maklumat lanjut yang diperoleh.

· **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**

Tiadak maklumat lanjut yang diperoleh.

5 Langkah-langkah pemadaman kebakaran

· **Bahan pemadam api**

· **Agen pemadam yang sesuai:** CO₂, pasir, serbuk pemadam kebakaran. Jangan gunakan air.

· **Agen pemadam yang tidak sesuai untuk tujuan keselamatan:** Air dalam pancutan penuh

· **Bahaya khusus yang timbul daripada bahan atau campuran** Tiadak maklumat lanjut yang diperoleh.

· **Panduan kepada pemadam kebakaran**

· **Kelengkapan perlindungan:** Tiada langkah khusus diperlukan.

6 Langkah-langkah pelepasan tidak sengaja

· **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan**

Pakai kelengkapan perlindungan. Jauhkan mereka yang tidak dilindung dari kawasan tercemar.

· **Langkah perlindungan alam sekitar:** Jangan biarkannya memasuki pembentung/air permukaan atau tanah.

(Bersambung ke halaman 3)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 2)

- **Kaedah dan bahan untuk pembendungan dan pembersihan:**
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)
Pastikan pengalihan udara mencukupi.
Jangan jirus dengan air atau agen pencuci akueus.
- **Rujukan ke bahagian lain**
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.
Lihat Bahagian 13 untuk maklumat pelupusan.

7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**
Pastikan pengalihan udara/ekzos yang mencukupi di tempat kerja.
Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:**
Jauhkan dari punca pencucuhan - Dilarang merokok.
Lindungi daripada haba.
Lindungi daripada cas-cas elektrostatik.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Simpan di tempat sejuk.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:**
Pastikan bekas sentiasa bertutup rapat.
Simpan di tempat yang sejuk dan kering di dalam bekas bertutup rapat.
Lindungi daripada haba dan pancaran terus cahaya matahari.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperoleh.

8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.
- **Parameter kawalan**

- **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

80-62-6 metil 2-metilpropenoat

PEL Nilai jangka panjang: 410 mg/m³, 100 ppm

- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.
- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**
Jauhkan daripada makanan, minuman dan makanan haiwan.
Segera tanggalkan semua pakaian yang tercemar dan kotor.
Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.
Elakkan daripada terkena kulit.
Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:**
Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.

(Bersambung ke halaman 4)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 3)

· **Perlindungan tangan:**



Sarung tangan pelindung.

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.

Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.

Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

· **Bahan sarung tangan**

Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain. Memandangkan produk merupakan suatu sediaan daripada beberapa bahan, ketahanan bahan sarung tangan tidak boleh dipastikan terlebih dahulu, oleh itu sarung tangan hendaklah diperiksa sebelum digunakan.

· **Jangka masa penyerapan bahan sarung tangan**

Waktu kemunculan yang tepat hendaklah diperoleh pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

· **Perlindungan mata:**



Gogal bertutup rapat

9 Sifat fizikal dan kimia

· **Maklumat tentang ciri fizik dan kimia**

· **Maklumat Am**

· **Rupa:**

Bentuk: Bendalir

Warna: Tidak berwarna

· **Bau:** Ciri

· **Ambang bau:** Tidak ditentukan.

· **Nilai pH:** Tidak ditentukan.

· **Perubahan pada keadaan**

Takat lebur/takat beku: Tidak ditentukan.

Takat didih awal dan julat didih: 101 °C

· **Takat kilat:** 10 °C

· **Kemudahbakaran (pepejal, gas):** Tidak berkenaan

· **Suhu pencucuhan:** 430 °C

· **Suhu penguraian:** Tidak ditentukan.

· **Suhu pengautocucuhan:** Produk tidak tercucuh sendiri

· **Bahaya letupan:** Produk tidak mudah meletup. Walau bagaimanapun, pembentukan campuran udara/wap mungkin berlaku.

· **Had letupan :**

Bawah: 2.1 Vol %

Atas: 12.5 Vol %

· **Tekanan wap pada 20 °C:** 47 hPa

(Bersambung ke halaman 5)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 4)

· Ketumpatan pada 20 °C:	0.94 g/cm ³
· Ketumpatan bandingan	Tidak ditentukan.
· Ketumpatan wap	Tidak ditentukan.
· Kadar penyejatan	Tidak ditentukan.
· Keterlarutan dalam / Keterlarutcampuran dengan Air:	Tidak terlarut campur atau sukar bercampur.
· Pekali sekatan: n-oktanol/air	Tidak ditentukan.
· Kelikatan:	
Dinamik pada 20 °C:	1 mPas
Kinematik:	Tidak ditentukan.
· Kandungan pelarut:	
Kandungan pepejal:	0.0 %
· Maklumat lain	Tiada maklumat lanjut yang diperoleh.

10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

· **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

80-62-6 metil 2-metilpropenoat

Oral	LD50	7,872 mg/kg (rat)
------	------	-------------------

- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Merengsa kepada kulit dan mukus membran.
- **Kerosakan atau kerengsaan mata yang serius** Tiada kesan kerengsaan.
- **Pemekaan pernafasan / kulit** Pemekaan mungkin berlaku jika terkena kulit.
- **Maklumat tambahan toksikologi:**
Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:
Perengsa

12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.

(Bersambung ke halaman 6)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW


(Sambungan halaman 5)

- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiadak maklumat lanjut yang diperoleh.
- **Mobiliti di dalam tanah** Tiadak maklumat lanjut yang diperoleh.
- **Maklumat tambahan ekologi:**
- **Nota am:**
Bahaya air kelas 1 (Peraturan Jerman) (Penilaian sendiri): sedikit berbahaya kepada air
Jangan biarkan produk yang tidak dicairkan atau dalam kuantiti yang banyak memasuki air tanah, saluran air atau sistem pembetulan.
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan
- **Kesan buruk yang lain** Tiadak maklumat lanjut yang diperoleh.

13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentungan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi

14 Maklumat pengangkutan

· Nombor UN · ADR, IMDG, IATA	UN1247
· Nama penghantaran UN yang betul · ADR · IMDG, IATA	1247 METHYL METHACRYLATE MONOMER, STABILIZED solution METHYL METHACRYLATE MONOMER, STABILIZED solution
· pengangkutan kelas bahaya · ADR, IMDG, IATA	
	
· Kelas · Label	3 Cecair mudah terbakar. 3
· Kumpulan pembungkusan · ADR, IMDG, IATA	II
· Hazard persekitaran:	Tidak berkenaan
· Langkah perlindungan khas untuk pengguna · Kod bahaya (Kemler): · Nombor EMS: · Stowage Category	Amaran: Cecair mudah terbakar. 33 F-E,S-D C

(Bersambung ke halaman 7)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 6)

· Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC	Tidak berkenaan
· Pengangkutan/Maklumat Tambahan:	
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Peraturan Model" UN:	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

15 Maklumat pengawalseliaan

- **Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut**
Tiada maklumat lanjut yang diperolehi.

· **Senarai Rujukan Bahan Berbahaya Alam Sekitar**

Semua ramuan disenaraikan.

- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram hazard**



GHS02 GHS07

- **Perkataan isyarat Bahaya**
- **Komponen pelabelan yang menentukan bahaya:**
metil 2-metilpropenoat

· **Pernyataan hazard**

Cecair dan wap amat mudah terbakar.
Menyebabkan kerengsaan kulit.
Boleh menyebabkan tindak balas alahan kulit.
Boleh menyebabkan kerengsaan pernafasan.

· **Pernyataan langkah perlindungan**

Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.
Gunakan kelengkapan elektrik/pengalihudaraan/pencahayaan yang tahan letupan.
Elakkan daripada tersedut habuk/wasap/gas/kabus/wap/semburan.
JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.
Simpan di tempat berkunci.
Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

(Bersambung ke halaman 8)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 20.01.2022

Disemak semula pada 20.01.2022

Nama dagang: TECHNOVIT 9100 LIQUID NEW

(Sambungan halaman 7)

· **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

16 Maklumat lain

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

· **Hubungi:**

· **Singkatan dan akronim:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Cec. M. Bkr 2: Cecair mudah terbakar – Kategori 2

Kreng. Kulit 2: Kakisan atau kerengsaan kulit – Kategori 2

Pem. Kulit 1: Pemekaan kulit – Kategori 1

STOT SE 3: Ketoksikan organ sasaran khusus (pendedahan tunggal) – Kategori 3

-MY-

安全資料表

據根根據據性化學品標示及通識規則

打印日期 2022.01.20

在 2022.01.20 審核

1 化學品與廠商資料

- 產品識別者
- 化學品中文名稱、名稱、化學品俗名或商品名: **TECHNOVIT 9100 LIQUID NEW**
- 商品編號: 14655(L)
- 相應純物質或者混合物的相關下位用途及禁止用途 無相關詳細資料。
- 物質或混合物的用途 實驗室化學物
- 安全技術說明書內供應商詳細信息
- 企業名稱:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- 可獲取更多資料的部門: Product safety department
- 緊急聯繫電話號碼:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危害辨識資料

- 緊急情況概述:
無色的，流體，高度易燃液體和蒸氣。造成皮膚刺激。可能造成皮膚過敏。可能造成呼吸道刺激。

- GHS危險性類別



火焰

易燃液體 第2級

H225 高度易燃液體和蒸氣



腐蝕/刺激皮膚物質 第2級

H315 造成皮膚刺激

皮膚過敏物質 第1級

H317 可能造成皮膚過敏

特定標的器官系統毒性物質(單一暴露) 第3級 H335 可能造成呼吸道刺激

- 標籤要素

- GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

- 象形圖



GHS02



GHS07

- 警示詞 危險

- 標籤上辨別危險的成份:

異丁烯酸甲酯

- 危險性說明

高度易燃液體和蒸氣

造成皮膚刺激

可能造成皮膚過敏

(在 2 頁繼續)

安全資料表

據根據據據性化學品標示及通識規則

打印日期 2022.01.20

在 2022.01.20 審核

化學品中文名稱名稱名稱化學品俗名或商品名：TECHNOVIT 9100 LIQUID NEW

(在 1 頁繼續)

可能造成呼吸道刺激

· 防範說明

· 預防措施

遠離熱源/火花/明火/熱表面。 - 禁止抽菸。
使用防爆的電氣/通風/照明/設備。
避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

· 應急措施

如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

貯存貯存貯存

加鎖存放。

處置處置處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· 其他有害性

- PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質) 評價結果
- PBT(殘留性、生物濃縮性、毒性物質) 不適用的
- vPvB(高殘留性、高生物濃縮性物質): 不適用的

3 成分辨識資料

· 混合物

描述描述描述以下含有無害添加劑的成分組成的混合物

· 危險的成分:

80-62-6	異丁烯酸甲酯	>50-≤100%
	⚠ 易燃液體 第2級, H225; ⚠ 腐蝕/刺激皮膚物質 第2級, H315; 皮膚過敏物質 第1級, H317; 特定標的器官系統毒性物質(單一暴露) 第3級, H335	

4 急救措施

· 應急措施要領

吸入吸入吸入

供給新鮮空氣並且確保會叫醫生。
萬一病人不清醒時,請讓病人側躺以便移動。

· 皮膚接觸: 馬上用水和肥皂進行徹底的沖洗。

· 眼睛接觸: 張開眼睛在流水下沖洗數分鐘。

食入食入食入如果症狀仍然持續,請諮詢醫生。

· 給醫生的資料:

- 最重要的急慢性症狀及其影響 無相關詳細資料。
- 需要及時的醫療處理及特別處理的症狀 無相關詳細資料。

5 滅火措施

· 滅火方法

· 滅火的方法和滅火劑: 使用二氧化碳 (CO₂)、沙粒、滅火粉末. 切勿使用水。

· 為了安全,不適當的滅火劑會: 使用全噴嘴的水

· 特別危險性 無相關詳細資料。

· 特殊滅火方法

· 消防人員特殊的防護裝備: 沒有要求特別的措施。

TW

(在 3 頁繼續)

安全資料表

據根根據據性化學品標示及通識規則

打印日期 2022.01.20

在 2022.01.20 審核

化學品中文名稱名稱名稱化學品俗名或商品名：TECHNOVIT 9100 LIQUID NEW

(在 2 頁繼續)

6 洩漏處理方法

- **保護措施** 帶上保護儀器. 讓未受到保護的人們遠離.
- **環境保護措施:** 切勿讓其進入下水道/水面或地下水.
- **密封及淨化方法和材料:**
吸收液體粘合原料 (沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑).
確保有足夠的通風裝置.
切勿用水或水溶清潔劑來沖清.
- **參照其他部分**
有關安全處理的資料請參閱第 7 節.
有關個人保護裝備的資料請參閱第 8 節.
有關棄置的資料請參閱第 13 節.

7 安全處置與儲存方法

- **操作處置**
- **儲存** 儲存 儲存 儲存
確保工作間有良好的通風/排氣裝置.
防止氣溶膠的形成.
- **有關火災及防止爆炸的資料:**
遠離火源 - 切勿吸煙.
防熱.
防靜電.
- **混合危險性等安全儲存條件**
- **儲存** 儲存 儲存 儲存
· **儲存庫和容器須要達到的要求:** 儲存在陰涼的位置.
· **有關使用一個普通的儲存設施來儲存的資料:** 不需要.
· **有關儲存條件的更多資料:**
將容器密封.
儲存密封的貯藏器內,並放在陰涼、幹爽的位置.
免受接觸熱力和直接受陽光照射.
· **具體的最終用戶** 無相關詳細資料.

8 暴露預防措施

- **工程控制方法:** 沒有進一步數據;見第 7 項.
 - **控制變數**
 - **在工作場需要監控的限值成分**
- | 80- 80 - 80 異丁 羧酸甲酯 | |
|---|---|
| PEL (TW) | PC-TWA: 410 mg/m ³ , 100 ppm |
| OEL (CN) | PC-TWA: 100 mg/m ³
敏 |
- **額外的資料:** 制作期間有效的清單將作為基礎來使用.

- **遺漏控制**
- **個人防護設備:**
- **一般保護和衛生措施:**
遠離食品、飲料和飼料.
立即除去所有的不潔的和被汙染的衣服.
在休息之前和工作完畢後請清洗雙手.

(在 4 頁繼續)

安全資料表

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打印日期 2022.01.20

在 2022.01.20 審核

化學品中文名稱名稱名稱化學品俗名或商品名：TECHNOVIT 9100 LIQUID NEW

(在 3 頁繼續)

避免和皮膚接觸。

避免和眼睛及皮膚接觸。

· 呼吸系統防護:

如果曾短暫接觸或在低污染的情況下,請使用呼吸過濾裝置. 如果曾深入或較長時間接觸,請使用獨立的呼吸保護裝置.

· 手防護:



保護手套

手套的物料必須是不滲透性的,且能抵抗該產品/物質/添加劑.

基於缺乏測試,對於產品/制劑/化學混合物,並不會提供手套材料的建議

選擇手套材料時,請注意材料的滲透時間,滲濾率和降解參數

· 手套材料

選擇合適的手套不單取決於材料,亦取決於質量特征,以及來自哪一間生產廠家,因為該產品是由很多材料

· 配製而成. 手套材料的抵抗力並不可預計,所以,必須在使用之前進行檢查

· 滲入手套材料的時間 請向勞保手套生產廠家獲取準確的破裂時間並觀察實際的破裂時間

· 眼睛防護:



密封的護目鏡

9 物理及化學性質

· 有關基本物理及化學特性的資訊

· 一般說明

外觀外觀外觀

形狀形狀形狀

流體

顏色顏色顏色

無色的

氣味氣味氣味

有特性的

· 嗅覺閾限

未決定.

· pH值:

未決定.

· 條件的更改

熔點熔點熔點

未確定的

沸點沸點沸點

沸點和沸程:

101 °C

閃點閃點閃點

10 °C

· 可燃性(固體、氣體): 不適用的

· 點火溫度:

430 °C

· 分解溫度:

未決定.

· 自燃溫度:

該產品是不自燃的

· 爆炸的危險性:

該產品並非爆炸性的然而有可能形成可爆炸性的空氣/蒸汽混合物

· 爆炸極限:

較低較低較低

2.1 Vol %

較高較高較高

12.5 Vol %

· 蒸氣壓 在 20 °C:

47 hPa

(在 5 頁繼續)

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在 2022.01.20 審核

化學品中文名稱名稱名稱化學品俗名或商品名：TECHNOVIT 9100 LIQUID NEW

(在 4 頁繼續)

密度密度密度0 °C: 0.94 g/cm³
 · 相對密度密度 未決定.
 · 蒸氣密度 未決定.
 · 蒸發速率 未決定.

溶解解性解性
 水: 不能拌和的或難以拌和

辛醇辛醇辛醇分配係數係 未決定.

· 黏性:
 動態動態動態0 °C: 1 mPas
 運動運動運動學的 未決定.

· 溶劑成份:

固體成份: 0.0 %

· 其他資訊 無相關詳細資料。

10 安定性及反應性

應反應性應相關詳細資料。

穩定穩定穩定

分解分解分解避免的情況: 如果遵照規格使用則不會分解.

有害有害有害應可應性 未有已知的危險反應.

避應避免避條件 無相關詳細資料。

· 不相容的物質: 無相關詳細資料。

· 危險的分解產物: 未知有危險的分解產品。

11 毒性資料

· 對毒性學影響的資訊

· 急性毒性:

· 與分類相關的 LD/LC50 值:

80-66-6 異丁羧酸甲酯

口腔	LD50	7,872 mg/kg (rat)
----	------	-------------------

· 重要的刺激劑影響:

皮膚皮膚皮膚刺激皮膚和粘膜.

· 在眼睛上面: 沒有刺激的影響.

致敏致敏致敏作用過皮膚接觸可能造成敏化作用.

· 更多毒物的資料:

根據有關配制的一般歐盟分類指南的計算方法 (刊印在最新版本), 該產品顯示以下的危險:
 刺激性的

12 生態資料

· 毒態毒性毒性

· 水生毒性: 無相關詳細資料。

持久持久持久難降解性難相關詳細資料。

· 環境系統習性:

· 潛在的累積累積難相關詳細資料。

(在 6 頁繼續)

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在 2022.01.20 審核

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(在 5 頁繼續)

土壤土壤動植物性毒相關詳細資料。

- 額外的生態學資料:
 - 總括注解:
 - 水危害級別 1(德國規例) (通過名單進行自我評估): 對水是稍微危害的
 - 不要讓未稀釋或大量的產品接觸地下水、水道或者汗水系統。
 - PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質) 評價結果
 - PBT(殘留性、生物濃縮性、毒性物質) 不適用的
 - vPvB(高殘留性、高生物濃縮性物質): 不適用的
- 其他其他圖他作用無相關詳細資料。

13 廢棄處置方法

廢棄處置方法

建議建議建議將該產品和家居垃圾一起丟棄. 不要讓該產品接觸汗水系統.

- 受污染的容器和包裝:
- 建議建議建議根據官方的規章來丟棄.

14 運送資料

聯合聯合圖危險貨物編號(UN號)

· ADR, IMDG, IATA UN1247

· UN適當裝船名

· ADR

1247 METHYL METHACRYLATE MONOMER, STABILIZED 溶液

· IMDG, IATA

METHYL METHACRYLATE MONOMER, STABILIZED solution

運輸運輸危險等級

· ADR, IMDG, IATA



· 級別

3 易燃液體

標籤標籤標籤

3

· 包裝組別

· ADR, IMDG, IATA

II

· 環境危害

不適用的

· 用戶特別預防措施

警告: 易燃液體

· 危險編碼:

33

· 標碼號碼號碼

F-E,S-D

· Stowage Category

C

· Stowage Code

SW1 Protected from sources of heat.

SW2 Clear of living quarters.

· MARPOL73/78(針對船舶引起的海洋污染預防協約

件附件書根據根據C國際國際貨物編號)值大量大量

運送運送運送

不適用的

(在 7 頁繼續)

安全資料表

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打印日期 2022.01.20

在 2022.01.20 審核

化學品中文名稱名稱名稱： TECHNIVIT 9100 LIQUID NEW

(在 6 頁繼續)

運輸運輸運輸的資料:

· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "標準規定":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED 溶液, 3, II

15 法規資料

- 對相應純物質或者混合物的安全、保健及環境法規/法律 無相關詳細資料。
- 優先管理化學品之指定及運作管理辦法

附表附表附表對於未滿十八歲嬰孩嬰孩嬰孩後未滿女年女性變工具危害性之化學品

沒有列出成份

第二第二條第二款第一目

沒有列出成份

第二第二條第二款第二目

列出所有成分

· 新化學物質及既有化學物質資料登錄辦法 英

沒有列出成份

國現國現國現化學物質名錄

列出所有成分

· TCSCA

列管編號編號編號

沒有列出成份

· 毒性分類

沒有列出成份

· 管制濃度 (w/w%)

沒有列出成份

· 大量運作基準(公斤)

沒有列出成份

· 新化學物質及既有化學物質資料登錄辦法, 附表六

沒有列出成份

· TCSI - Taiwan Chemical Substance Inventory

列出所有成分

· GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

(在 8 頁繼續)

安全資料表

據根據危險性化學品標示及通識規則

打印日期 2022.01.20

在 2022.01.20 審核

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(在 7 頁繼續)

象形圖



GHS02 GHS07

警示 警告 危險

標籤上辨別危險的成份：

異丁烯酸甲酯

危險性說明

高度易燃液體和蒸氣

造成皮膚刺激

可能造成皮膚過敏

可能造成呼吸道刺激

防範說明

預防措施

遠離熱源/火花/明火/熱表面。 - 禁止抽菸。

使用防爆的電氣/通風/照明/設備。

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

應急措施

如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

貯存 貯存 貯存

加鎖存放。

處置 處置 處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

- 化學物質安全性評價：尚未進行化學物質安全性評價

16 其他資料

該資料是基於我們目前的知識。然而,這並不構成對任何特定產品特性的擔保並且不建立一個法律上有效的合同關係。

聯絡：

縮寫：

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累積性有毒物質

vPvB: very Persistent and very Bioaccumulative

易燃液體 第2級: Flammable liquids – Category 2

腐蝕/刺激皮膚物質 第2級: Skin corrosion/irritation – Category 2

皮膚過敏物質 第1級: Skin sensitisation – Category 1

特定標的器官系統毒性物質(單一暴露) 第3級: Specific target organ toxicity (single exposure) – Category 3

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Avsnitt 1: Identifikasjon av stoffet/stoffblandingen og av selskapet/foretaket

- **1.1 Produktidentifikator**
- **Handelsnavn:** TECHNOVIT 9100 LIQUID NEW
- **Artikkelnummer:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Relevante identifiserte bruksområder for stoffet eller stoffblandingen og bruk som frarådes**
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Opplysninger om leverandøren av sikkerhetsdatabladet**
- **Produsent/leverandør:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødtelefonnummer**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

Avsnitt 2: Fareidentifikasjon

- **2.1 Klassifisering av stoffet eller stoffblandingen**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Meget brannfarlig væske og damp.



GHS07

Skin Irrit. 2 H315 Irriterer huden.

Skin Sens. 1 H317 Kan utløse en allergisk hudreaksjon.

STOT SE 3 H335 Kan forårsake irritasjon av luftveiene.

- **2.2 Merkingselementer**
- **Merking iht. bestemmelse (EC) Nr. 1272/2008**
Produktet er klassifisert og merket i henhold til CLP-forordningen.
- **Farepiktogrammer**



GHS02 GHS07

- **Varselord Fare**
- **Farebestemmende komponenter ved etikettering:**
metylmetakrylat
- **Faresetninger**
H225 Meget brannfarlig væske og damp.

(fortsatt på side 2)

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: TECHNOVIT 9100 LIQUID NEW

(fortsatt fra side 1)

H315 Irriterer huden.

H317 Kan utløse en allergisk hudreaksjon.

H335 Kan forårsake irritasjon av luftveiene.

· **Sikkerhetssetninger**

P210 Holdes vekk fra varme, varme overflater, gnister, åpen ild og andre antenningskilder. Røyking forbudt.

P241 Bruk elektrisk materiell/ventilasjonsmateriell/belysningsmateriell som er eksplosjonssikkert.

P261 Unngå innånding av støv/røyk/gass/tåke/damp/aerosoler.

P303+P361+P353 VED HUDKONTAKT (eller håret): Tilsølte klær må fjernes straks. Skyll [eller dusj] huden med vann.

P405 Oppbevares innelåst.

P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.

· **2.3 Andre farer**· **Resultater av PBT- og vPvB-vurdering**· **PBT:** Ikke brukbar.· **vPvB:** Ikke brukbar.

Avsnitt 3: Sammensetning/opplysninger om bestanddeler

· **3.2 Kjemisk karakterisering: Stoffblandinger**· **Beskrivelse:** Blanding av nedensående oppførte stoffer med ufarlige tilsetninger.· **Farlige innholdsstoffer:**

CAS: 80-62-6	metylmetakrylat	>50-≤100%
EINECS: 201-297-1	⚠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Ytterligere informasjoner:** Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

Avsnitt 4: Førstehjelpstiltak

· **4.1 Beskrivelse av førstehjelpstiltak**· **Etter innånding:**

Rikelig frisklufttilførsel, søk legehjelp for sikkerhets skyld.

Ved bevisstløshet lagring og transport i stabil sidestilling.

· **Etter hudkontakt:** Vask straks med vann og sepe og skyll godt etterpå.· **Etter øyekontakt:** Skyll øynene med åpne øyenlokk i flere minutter under rennende vann.· **Etter svelging:** Ved fortsatt besvær må lege konsulteres.· **4.2 De viktigste symptomene og virkningene, både akutte og forsinkede**

Ikke noe mer relevant informasjon tilgjengelig.

· **4.3 Angivelse av om umiddelbar legehjelp og spesialbehandling er nødvendig**

Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 5: Brannsløkkingstiltak

· **5.1 Sløkkingsmidler**· **Egnede slukningsmidler:** CO₂, sand, slukningspulver. Bruk ikke vann.· **Av sikkerhetsgrunner ikke egnede slukningsmidler:** Vann i full stråle· **5.2 Særlige farer knyttet til stoffet eller stoffblandingen** Ikke noe mer relevant informasjon tilgjengelig.

(fortsatt på side 3)

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: **TECHNOVIT 9100 LIQUID NEW**

(fortsatt fra side 2)

- **5.3 Råd til brannmannskaper**
- **Spesielt verneutstyr:** Ingen spesielle tiltak nødvendig.

Avsnitt 6: Tiltak ved utilsiktede utslipp

- **6.1 Personlige forsiktighetsregler, personlig verneutstyr og nødrutiner**
Ta på beskyttelsesdrakt. Hold ubeskyttede personer borte.
- **6.2 Forsiktighetsregler med hensyn til miljø** La ikke produktet komme ned i kloakk/overflatevann/grunnvann.
- **6.3 Metoder og materialer for oppsamling og rensing**
Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).
Sørg for tilstrekkelig ventilasjon.
Skyll ikke bort med vann eller med vannholdige rengjøringsmidler.
- **6.4 Henvisning til andre avsnitt**
Informasjoner om sikker håndtering, se kapittel 7.
Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.
Informasjoner om bortskaffelse/deponering, se kapittel 13.

Avsnitt 7: Håndtering og lagring

- **7.1 Forsiktighetsregler for sikker håndtering**
Sørg for god ventilasjon/avsugning på arbeidsplassen.
Unngå aerosoldannelse.
- **Henvisninger om brann- og eksplosjonsvern:**
Bruk av åpen ild forbudt - røyking forbudt.
Beskytt mot varme.
Gjør tiltak mot elektrostatisk oppladning.
- **7.2 Vilkår for sikker lagring, herunder eventuelle uforenligheter**
- **Lagring:**
- **Krav til lagerrom og beholdere:** Lagres på et kjølig sted.
- **Informasjoner om felles lagring:** Ikke nødvendig.
- **Ytterligere informasjon om lagervilkårene:**
Hold beholderne tett tillukket.
Lagres kjølig og tørt i godt tillukkede beholdere.
Beskyttes mot varme og direkte solpåvirkning.
- **7.3 Særlig(e) sluttanvendelse(r)** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 8: Eksponeringskontroll / personlig verneutstyr

- **8.1 Kontrollparametere**
- **Ytterligere informasjon om utforming av tekniske anlegg:** Ingen ytterligere informasjon, se punkt 7.

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

80-62-6 metylmetakrylat

AG	Korttidsverdi: 400 mg/m ³ , 100 ppm
	Langtidsverdi: 100 mg/m ³ , 25 ppm
A E	

- **Ytterligere informasjon:** Basis: listene som var gyldige ved oppstillingen.

(fortsatt på side 4)

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: TECHNOVIT 9100 LIQUID NEW

(fortsatt fra side 3)

· 8.2 Eksponeringskontroll

· Personlig verneutstyr:

· Generelle verne- og hygienetiltak:

Holdes adskilt fra næringsmidler, drikkevarer og førstoffer.

Fjern omgående forurensede, gjennomvåtede klær.

Vask hendene før arbeidspauser og ved arbeidets slutt.

Unngå berøring med huden.

Unngå berøring med øyne og hud.

· Åndedrettsvern:

Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.

· Håndvern:



Beskyttelseshansker

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen.

På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblanding.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

· hanskemateriale

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenner og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsberegnes, og denne må testes før bruk.

· gjennomtrengingstid for hanskemateriale

Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.

· Øyevern:



Tettsittende vernebrille

Avsnitt 9: Fysiske og kjemiske egenskaper

· 9.1 Opplysninger om grunnleggende fysiske og kjemiske egenskaper

· alminnelige opplysninger

· Utseende:

Form: Flytende

Farge: Fargeløs

· **Lukt:** Karakteristisk

· **Lukterskel:** Ikke bestemt.

· **pH-verdi:** Ikke bestemt.

· Tilstandsending

Smeltepunkt/frysepunkt: Ikke bestemt.

Startkokepunkt og kokeområde: 101 °C

· **Flammepunkt:** 10 °C

· **Antennelighet (fast stoff, gass):** Ikke brukbar.

· **Antennelsestemperatur:** 430 °C

(fortsatt på side 5)

NO

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: **TECHNOVIT 9100 LIQUID NEW**

(fortsatt fra side 4)

· Nedbrytingstemperatur:	Ikke bestemt.
· Selvantennelsestemperatur:	Produktet er ikke selvantennelig.
· Ekspllosive egenskaper:	Produktet er ikke eksplosjonsfarlig. Dannelse av eksplosjonsfarlige damp-/luftblandinger er dog mulig.
· Ekspllosjonsgrenser:	
Nedre:	2,1 Vol %
Øvre	12,5 Vol %
· Damptrykk ved 20 °C:	47 hPa
· Tetthet ved 20 °C:	0,94 g/cm ³
· Relativ tetthet:	Ikke bestemt.
· Damptetthet:	Ikke bestemt.
· Fordampingshastighet:	Ikke bestemt.
· Løslighet i / blandbarhet med vann:	Ikke, hhv. lite blandbar.
· Fordelingskoeffisient; n-oktanol/vann:	Ikke bestemt.
· Viskositet:	
Dynamisk ved 20 °C:	1 mPas
Kinematisk:	Ikke bestemt.
· Løsningsmiddelandel:	
VOC (EF)	0,00 %
Andel faste stoffer:	0,0 %
· 9.2 Andre opplysninger	Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Risiko for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som skal unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Uforenlige materialer** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytingsprodukter** Ingen farlige spaltningsprodukter kjente.

Avsnitt 11: Toksikologiske opplysninger

- **11.1 Opplysninger om toksikologiske virkninger**
- **Akutt giftighet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

· **Klassifiseringsrelevante LD/LC50-verdier:**

80-62-6 metylmetakrylat

Oral LD50 7.872 mg/kg (rat)

· **Primær irritasjonsvirkning:**

· **Hudetsing/hudirritasjon**

Irriterer huden.

· **Alvorlig øyeskade/øyeirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

(fortsatt på side 6)

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: **TECHNOVIT 9100 LIQUID NEW**

(fortsatt fra side 5)

- **Sensibilisering ved innånding eller hudkontakt**
Kan utløse en allergisk hudreaksjon.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Arvestoffskadelig virkning på kjønnsceller** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Kreftfremkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksicitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering**
Kan forårsake irritasjon av luftveiene.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

Avsnitt 12: Økologiske opplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumuleringsevne** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.
- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:**
Vannfareklasse 1 (D) (Selvklassifisering): lett farlig for vann
Ikke la stoffet komme ufortynnet ned i grunnvannet, i vassdrag eller i kloakker.
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadevirkninger** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 13: Sluttbehandling

- **13.1 Avfallsbehandlingsmetoder**
- **Anbefaling:** Må ikke bortskaftes sammen med husholdningsavfall. Må ikke komme ned i kloakk.
- **Ikke rengjort emballasje:**
- **Anbefaling:** Deponering i henhold til myndighetenes forskrifter.

Avsnitt 14: Transportopplysninger

- | | |
|-----------------------------------|---|
| · 14.1 FN-nummer | |
| · ADR, IMDG, IATA | UN1247 |
| · 14.2 FN-forsendelsesnavn | |
| · ADR | 1247 METYLMETACRYLAT MONOMER, STABILISERT Løsning |
| · IMDG, IATA | METHYL METHACRYLATE MONOMER, STABILIZED solution |

(fortsatt på side 7)

NO

Sikkerhetsdatablad
iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: TECHNOVIT 9100 LIQUID NEW

(fortsatt fra side 6)

· 14.3 Transportfareklasse(r)

· ADR, IMDG, IATA



· klasse 3 Brannfarlige væsker
· Fareseddel 3

· 14.4 Emballasjegruppe

· ADR, IMDG, IATA II

· 14.5 Miljøfarer

Ikke brukbar.

· 14.6 Særlige forsiktighetsregler ved bruk

Advarsel: Brannfarlige væsker

· Farenummer (Kemler-tall):

33

· EMS-nummer:

F-E,S-D

· Stowage Category

C

· Stowage Code

SW1 Protected from sources of heat.
SW2 Clear of living quarters.· 14.7 Bulktransport i henhold til vedlegg II til
MARPOL 73/78 og IBC-regelverket

Ikke brukbar.

· Transport/ytterligere informasjoner:

· ADR

· Begrenset mengde (LQ)

1L

· Unntatte mengder (EQ)

Kode: E2

Maksimal nettovekt per inneremballasje: 30 ml

Maksimal nettovekt per ytteremballasje: 500 ml

· Transportkategori

2

· Tunnel restriksjonskode

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1247 METYLMETACRYLAT MONOMER, STABILISERT
LØSNING, 3, II

Avsnitt 15: Opplysninger om regelverk

· 15.1 Særlige bestemmelser / særskilt lovgivning om sikkerhet, helse og miljø for stoffet eller stoffblandingen

· Direktiv 2012/18/EU

· Spesifiserte farlige stoffer - VEDLEGG I ingen av innholdsstoffene er listet opp

· Seveso kategori P5c

· Mengdegrense (i tonn) for anvendelsen av krav til virksomheter på lavere nivå 5.000 t

· Mengdegrense (i tonn) for anvendelsen av krav til virksomheter på høyere nivå 50.000 t

· Forordning (EF) nr. 1907/2006 VEDLEGG XVII Begrensninger: 3

(fortsatt på side 8)

NO

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 20.01.2022

revidert den: 20.01.2022

Handelsnavn: TECHNOVIT 9100 LIQUID NEW

(fortsatt fra side 7)

· **Direktiv 2011/65/EF om begrensning av bruken av visse farlige stoffer i elektrisk og elektronisk utstyr - Vedlegg II**

ingen av innholdsstoffene er listet opp

· **Forordning (EF) nr. 273/2004 om utgangsstoffer for narkotika**

ingen av innholdsstoffene er listet opp

· **Forordning (EF) nr. 111/2005 om fastsettelse av regler for overvåking av handelen med utgangsstoffer for narkotika mel-lom Fellesskapet og tredjestater**

ingen av innholdsstoffene er listet opp

· **15.2 Vurdering av kjemikaliesikkerhet** En kjemisk sikkerhetsvurdering er ikke utført.

Avsnitt 16: Andre opplysninger

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produktens egenskaper og er ikke grunnlag for noe kontraktmessig rettsforhold.

· **Relevante satser**

H225 Meget brannfarlig væske og damp.

H315 Irriterer huden.

H317 Kan utløse en allergisk hudreaksjon.

H335 Kan forårsake irritasjon av luftveiene.

· **Forkortelser og akronymer:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Brannfarlige væsker – Kategori 2

Skin Irrit. 2: Hudetsing/hudirritasjon – Kategori 2

Skin Sens. 1: Hudsensibilisering – Kategori 1

STOT SE 3: Giftvirkning på bestemte organer (enkelteksponering) – Kategori 3

NO

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

- **1.1 Identificador del producto**
- **Nombre comercial:** TECHNOVIT 9100 LIQUID NEW
- **Número del artículo:** 14655(L)
- **UFI:** CRM1-90PP-2001-ST0H
- **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**
No existen más datos relevantes disponibles.
- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio
- **1.3 Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Aname**
C/ Perez Galdos no. 2
28693 Quijorna
Madrid, Spain
Tel: +34.91.816.89.50
Fax: +34.91.816.85.94
email: ventas@aname.es
- **Área de información:** Product safety department
- **1.4 Teléfono de emergencia:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECCIÓN 2: Identificación de los peligros

- **2.1 Clasificación de la sustancia o de la mezcla**
- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS07

Skin Irrit. 2 H315 Provoca irritación cutánea.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3 H335 Puede irritar las vías respiratorias.

- **2.2 Elementos de la etiqueta**
- **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**
El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: **TECHNOVIT 9100 LIQUID NEW**

(se continua en página 1)

· **Pictogramas de peligro**

GHS02 GHS07

· **Palabra de advertencia Peligro**· **Componentes peligrosos a indicar en el etiquetaje:**

metacrilato de metilo

· **Indicaciones de peligro**

H225 Líquido y vapores muy inflamables.

H315 Provoca irritación cutánea.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

· **Consejos de prudencia**

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

P241 Utilizar material [eléctrico/ de ventilación/iluminación] antideflagrante.

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente toda la ropa contaminada. Enjuagar la piel con agua [o ducharse].

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **2.3 Otros peligros**· **Resultados de la valoración PBT y mPmB**· **PBT:** No aplicable.· **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· **3.2 Caracterización química: Mezclas**· **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.· **Componentes peligrosos:**

CAS: 80-62-6	metacrilato de metilo	>50-≤100%
EINECS: 201-297-1	⚠ Flam. Líq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**· **En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.· **En caso de con los ojos:** Limpiar los ojos abiertos durante varios minutos con agua corriente.· **En caso de ingestión:** Consultar un médico si los trastornos persisten.· **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: TECHNOVIT 9100 LIQUID NEW

(se continua en página 2)

- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**
No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** CO₂, arena, polvo extintor. No utilizar agua.
- **Sustancias extintoras inapropiadas por razones de seguridad:** Agua a pleno chorro
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
Asegurar suficiente ventilación.
No enjuagar con agua ni productos de limpieza acuosos.
- **6.4 Referencia a otras secciones**
Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:**
Mantener alejadas las fuentes de encendido. No fumar.
Proteger del calor.
Tomar medidas contra las cargas electrostáticas.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
Almacenarlo en envases bien cerrados en un lugar fresco y seco.
Proteger del calor y de la luz directa del sol.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

ES

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: **TECHNOVIT 9100 LIQUID NEW**

(se continua en página 3)

SECCIÓN 8: Controles de exposición/protección individual

- **8.1 Parámetros de control**
- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

80-62-6 metacrilato de metilo

LEP	Valor de corta duración: 100 ppm
	Valor de larga duración: 50 ppm
	Sen, VLI

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

- **8.2 Controles de la exposición**

- **Equipo de protección individual:**

- **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Evitar el contacto con la piel.

Evitar el contacto con los ojos y la piel.

- **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

- **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

- **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

- **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

- **Protección de ojos:**



Gafas de protección herméticas

ES

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: **TECHNOVIT 9100 LIQUID NEW**

(se continua en página 4)

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma: Líquido

Color: Incoloro

· Olor: Característico

· Umbral olfativo: No determinado.

· valor pH: No determinado.

· Cambio de estado

Punto de fusión/punto de congelación: Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: 101 °C

· Punto de inflamación: 10 °C

· Inflamabilidad (sólido, gas): No aplicable.

· Temperatura de ignición: 430 °C

· Temperatura de descomposición: No determinado.

· Temperatura de auto-inflamación: El producto no es autoinflamable.

· Propiedades explosivas: El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

· Límites de explosión:

Inferior: 2,1 Vol %

Superior: 12,5 Vol %

· Presión de vapor a 20 °C: 47 hPa

· Densidad a 20 °C: 0,94 g/cm³

· Densidad relativa: No determinado.

· Densidad de vapor: No determinado.

· Tasa de evaporación: No determinado.

· Solubilidad en / miscibilidad con agua:

Poco o no mezclable.

· Coeficiente de reparto: n-octanol/agua: No determinado.

· Viscosidad:

Dinámica a 20 °C: 1 mPas

Cinemática: No determinado.

· Concentración del disolvente:

VOC (CE) 0,00 %

Contenido de cuerpos sólidos: 0,0 %

· 9.2 Otros datos No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

· 10.1 Reactividad No existen más datos relevantes disponibles.

· 10.2 Estabilidad química

· Descomposición térmica / condiciones que deben evitarse: No se descompone al emplearse adecuadamente.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: TECHNOVIT 9100 LIQUID NEW

(se continua en página 5)

- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

80-62-6 metacrilato de metilo

Oral	LD50	7.872 mg/kg (rat)
------	------	-------------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**
Puede provocar una reacción alérgica en la piel.
- **Indicaciones toxicológicas adicionales:**
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Puede irritar las vías respiratorias.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (autoclasificación): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

ES

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022


Nombre comercial: **TECHNOVIT 9100 LIQUID NEW**

(se continua en página 6)

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

· 14.1 Número ONU · ADR, IMDG, IATA	UN1247
· 14.2 Designación oficial de transporte de las Naciones Unidas · ADR · IMDG, IATA	1247 METACRILATO DE METILO MONÓMERO ESTABILIZADO Solución METHYL METHACRYLATE MONOMER, STABILIZED solution
· 14.3 Clase(s) de peligro para el transporte · ADR, IMDG, IATA	
	
· Clase · Etiqueta	3 Líquidos inflamables 3
· 14.4 Grupo de embalaje · ADR, IMDG, IATA	II
· 14.5 Peligros para el medio ambiente:	No aplicable.
· 14.6 Precauciones particulares para los usuarios · Número de identificación de peligro (Número Kemler): · Número EMS: · Stowage Category · Stowage Code	Atención: Líquidos inflamables 33 F-E,S-D C SW1 Protected from sources of heat. SW2 Clear of living quarters.
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR · Cantidades limitadas (LQ) · Cantidades exceptuadas (EQ) · Categoría de transporte · Código de restricción del túnel	1L Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml 2 D/E

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: **TECHNOVIT 9100 LIQUID NEW**

(se continua en página 7)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· "Reglamentación Modelo" de la UNECE:	UN 1247 METACRILATO DE METILO MONÓMERO ESTABILIZADO SOLUCIÓN, 3, II

SECCIÓN 15: Información reglamentaria

· **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**

- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **Categoría Seveso P5c LÍQUIDOS INFLAMABLES**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 5.000 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 50.000 t
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones:** 3

· **Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II**

ninguno de los componentes está incluido en una lista

· **REGLAMENTO (UE) 2019/1148**

· **Anexo I - PRECURSORES DE EXPLOSIVOS RESTRINGIDOS (Valor límite superior a efectos de la concesión de licencias con arreglo al artículo 5, apartado 3)**

ninguno de los componentes está incluido en una lista

· **Anexo II - PRECURSORES DE EXPLOSIVOS NOTIFICABLES**

ninguno de los componentes está incluido en una lista

· **Reglamento (CE) no 273/2004 sobre precursores de drogas**

ninguno de los componentes está incluido en una lista

· **Reglamento (CE) N o 111/2005 por el que establecen normas para la vigilancia del comercio de precursores de drogas entre la Comunidad y terceros países**

ninguno de los componentes está incluido en una lista

· **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frases relevantes**

H225 Líquido y vapores muy inflamables.

H315 Provoca irritación cutánea.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

· **Abreviaturas y acrónimos:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(se continua en página 9)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 20.01.2022

Revisión: 20.01.2022

Nombre comercial: TECHNOVIT 9100 LIQUID NEW

(se continua en página 8)

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Líquidos inflamables – Categoría 2**Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2**Skin Sens. 1: Sensibilización cutánea – Categoría 1**STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3*

ES

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn: TECHNOVIT 9100 LIQUID NEW**
- **Artikelnummer: 14655(L)**
- **UFI: CRM1-90PP-2001-ST0H**
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS02 flamma

Flam. Liq. 2 H225 Mycket brandfarlig vätska och ånga.



GHS07

Skin Irrit. 2 H315 Irriterar huden.

Skin Sens. 1 H317 Kan orsaka allergisk hudreaktion.

STOT SE 3 H335 Kan orsaka irritation i luftvägarna.

- **2.2 Märkningsuppgifter**
- **Märkning enligt förordning (EG) nr 1272/2008** Produkten är klassificerad och märkt enligt CLP-förordningen.
- **Faropiktogram**



GHS02 GHS07

- **Signalord** Fara
- **Riskbestämmande komponenter för etikettering:**
metylmetakrylat
- **Faroangivelser**
H225 Mycket brandfarlig vätska och ånga.
H315 Irriterar huden.

(Fortsättning på sida 2)

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 1)

H317 Kan orsaka allergisk hudreaktion.

H335 Kan orsaka irritation i luftvägarna.

· Skyddsangivelser

P210 Får inte utsättas för värme, heta ytor, gnistor, öppna lågor och andra antändningskällor.
Rökning förbjuden.

P241 Använd explosionssäker [elektrisk/ventilations-/belysnings-]utrustning.

P261 Undvik att inandas damm/rök/gaser/dimma/ångor/sprej.

P303+P361+P353 VID HUDKONTAKT (även håret): Ta omedelbart av alla nedstänkta kläder. Skölj huden med vatten [eller duscha].

P405 Förvaras inlåst.

P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

· 2.3 Andra faror**· Resultat av PBT- och vPvB-bedömningen**

· **PBT:** Ej användbar.

· **vPvB:** Ej användbar.

AVSNITT 3: Sammansättning/information om beståndsdelar

· 3.2 Kemisk karakterisering: Blandningar

· **Beskrivning:** Blandning bestående av nedan upplistade ämnen med ofarliga tillsatser.

· Farliga ingredienser:

CAS: 80-62-6	metylmetakrylat	>50-≤100%
EINECS: 201-297-1	☠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	

· **Ytterligare hänvisningar:** De angivna farohänvisningarnas ordalydelse framgår av kapitel 16.

AVSNITT 4: Åtgärder vid första hjälpen

· 4.1 Beskrivning av åtgärder vid första hjälpen**· Vid inandning:**

Riklig tillförsel av friskluft, kontakta läkare för säkerhets skull.

Vid medvetslöshet lägg och transportera patient stabilt i framstupa sidoläge.

· **Vid kontakt med huden:** Tvätta omedelbart med vatten och tvål och spola därefter noggrant.

· **Vid kontakt med ögonen:** Spola ögonen öppna i flera minuter under rinnande vatten.

· **Vid förtäring:** Om besvär kvarstår, kontakta läkare.

· 4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda

Ingen ytterligare relevant information finns till förfogande.

· 4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs

Ingen ytterligare relevant information finns till förfogande.

AVSNITT 5: Brandbekämpningsåtgärder

· 5.1 Släckmedel

· **Lämpliga släckningsmedel:** CO₂, sand, släckningspulver. Använd inget vatten.

· **Släckningsmedel som är olämpliga av säkerhetsskäl:** Vatten med full stråle

· 5.2 Särskilda faror som ämnet eller blandningen kan medföra

Ingen ytterligare relevant information finns till förfogande.

(Fortsättning på sida 3)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 2)

- **5.3 Råd till brandbekämpningspersonal**
- **Speciell skyddsutrustning:** Inga speciella åtgärder krävs.

AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

- **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer**
Använd skyddsutrustning. Håll oskyddade personer på avstånd.
- **6.2 Miljöskyddsåtgärder:** Förhindra produkten att tränga ner i avloppsnät/ytvatten/grundvatten.
- **6.3 Metoder och material för inneslutning och sanering:**
Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).
Se till att ventilationen är tillräcklig.
Spola ej bort med vatten eller vattenhaltiga rengöringsmedel.
- **6.4 Hänvisning till andra avsnitt**
Information beträffande säker hantering se kapitel 7.
Information beträffande personlig skyddsutrustning se kapitel 8.
Information beträffande avfallshantering se kapitel 13.

AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering**
Sörj för god ventilation/utsug på arbetsplatsen.
Undvik bildning av aerosol.
- **Hänvisningar beträffande brand- och explosionsskydd:**
Håll åtskild från antändningskällor - rök ej.
Skyddas mot värme.
Vidta åtgärder mot elektrostatisk uppladdning.
- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Förvaras svalt.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:**
Förvara behållaren tätt tillsluten.
Förvaras svalt och torrt i väl tillslutet emballage.
Skyddas mot värme och direkt solljus.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 8: Begränsning av exponeringen/personligt skydd

- **8.1 Kontrollparametrar**
- **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.

- **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

80-62-6 metylmetakrylat

OEL	Korttidsvärde: 400 mg/m ³ , 100 ppm
	Nivågränsvärde: 200 mg/m ³ , 50 ppm
	M, S

- **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.

(Fortsättning på sida 4)

Säkerhetsdatablad enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 3)

- **8.2 Begränsning av exponeringen**
- **Personlig skyddsutrustning:**
- **Allmänna skydds- och hygienåtgärder:**
Undvik kontakt med livsmedel, drycker och fodermedel.
Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.
Tvätta händerna före raster och efter arbetet.
Undvik kontakt med huden.
Undvik kontakt med ögonen och huden.
- **Andningsskydd:**
Vid kortvarig eller ringa belastning - använd andningsfilterutrustning; vid intensiv resp. längre exponering - använd andningsskyddsutrustning som är oberoende av omgivningsluften.
- **Handskydd:**



Skyddshandskar

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.
Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförts.

Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

- **Handskmaterial**
Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa. Då produkten bereds av flera material, kan handskmaterialets beständighet inte förutses och måste därför kontrolleras före användningen.
- **Handskmaterialets penetreringstid**
Exakt penetrationstid fastställs av skyddshandskarnas tillverkare och skall beaktas.
- **Ögonskydd:**



Tättslutande skyddsglasögon

AVSNITT 9: Fysikaliska och kemiska egenskaper

· 9.1 Information om grundläggande fysikaliska och kemiska egenskaper

· Allmänna uppgifter

· Utseende:

Form:	Flytande
Färg:	Färglös
Lukt:	Karaktäristisk
Luktröskel:	Ej bestämd.

· **pH-värde:** Ej bestämd.

· Tillståndsändring

Smältpunkt/frys punkt: Ej bestämd.
Initial kokpunkt och kokpunktsintervall: 101 °C

· **Flampunkt:** 10 °C

· **Brandfarlighet (fast form, gas):** Ej användbar.

· **Tändtemperatur:** 430 °C

(Fortsättning på sida 5)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 4)

· Sönderfallstemperatur:	Ej bestämd.
· Självantändningstemperatur:	Produkten är ej självantändande.
· Explosiva egenskaper:	Produkten är ej explosionsfarlig, men bildning av explosionsfarliga ångluft-blandningar är möjlig.
· Explosionsgränser:	
Nedre:	2,1 Vol %
Övre:	12,5 Vol %
· Ångtryck vid 20 °C:	47 hPa
· Densitet vid 20 °C:	0,94 g/cm ³
· Relativ densitet	Ej bestämd.
· Ångdensitet	Ej bestämd.
· Avdunstningshastighet:	Ej bestämd.
· Löslighet i / blandbarhet med Vatten:	Ej resp. föga blandbar.
· Fördelningskoefficient: n-oktanol/vatten:	Ej bestämd.
· Viskositet:	
Dynamisk vid 20 °C:	1 mPas
Kinematisk:	Ej bestämd.
· Lösningsmedelhalt:	
VOC (EG)	0,00 %
Andel av fasta partiklar:	0,0 %
· 9.2 Annan information	Ingen ytterligare relevant information finns till förfogande.

AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

AVSNITT 11: Toxikologisk information

- **11.1 Information om de toxikologiska effekterna**
- **Akut toxicitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· **Klassificeringsrelevanta LD/LC50-värden:**

80-62-6 metylmetakrylat

Oral LD50 7.872 mg/kg (rat)

- **Primär retningseffekt:**
- **Frätande/irriterande på huden**
Irriterar huden.

(Fortsättning på sida 6)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 5)

- **Allvarlig ögonskada/ögonirritation**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Luftvägs-/hudsensibilisering**
Kan orsaka allergisk hudreaktion.
- **Ytterligare toxikologiska hänvisningar:**
- **CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)**
- **Mutagenitet i könsceller**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Cancerogenitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Reproduktionstoxicitet**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Specifik organtoxicitet – enstaka exponering**
Kan orsaka irritation i luftvägarna.
- **Specifik organtoxicitet – upprepad exponering**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Fara vid aspiration** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

AVSNITT 12: Ekologisk information

- **12.1 Toxicitet**
- **Akvatisk toxicitet:** Ingen ytterligare relevant information finns till förfogande.
- **12.2 Persistens och nedbrytbarhet** Ingen ytterligare relevant information finns till förfogande.
- **12.3 Bioackumuleringsförmåga** Ingen ytterligare relevant information finns till förfogande.
- **12.4 Rörlighet i jord** Ingen ytterligare relevant information finns till förfogande.
- **Ytterligare ekologiska hänvisningar:**
- **Allmänna hänvisningar:**
Vattenföroreningsklass 1 (Självtvärdering): liten risk för vattenförorening.
Låt ej tränga ner i grundvatten, vattendrag eller i avloppsnätet i utspätt tillstånd resp. i större mängder.
- **12.5 Resultat av PBT- och vPvB-bedömningen**
- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.
- **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.

AVSNITT 14: Transportinformation

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1 UN-nummer · ADR, IMDG, IATA | UN1247 |
| <ul style="list-style-type: none"> · 14.2 Officiell transportbenämning · ADR | 1 2 4 7 M E T Y L M E T A K R Y L A T , M O N O M E R ,
S T A B I L I S E R A D , L ö s n i n g |
| <ul style="list-style-type: none"> · IMDG, IATA | M E T H Y L M E T H A C R Y L A T E M O N O M E R , S T A B I L I Z E D
s o l u t i o n |

(Fortsättning på sida 7)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

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(Fortsättning från sida 6)

· 14.3 Faroklass för transport

· ADR, IMDG, IATA



· Klass 3 Brandfarliga vätskor
· Etikett 3

· 14.4 Förpackningsgrupp

· ADR, IMDG, IATA II

· 14.5 Miljöfaror: Ej användbar.

· 14.6 Särskilda skyddsåtgärder

· Farlighetsnummer (Kemler-tal): Varning: Brandfarliga vätskor

· EMS-nummer: 33

· Stowage Category F-E,S-D

· Stowage Code C

· Stowage Code SW1 Protected from sources of heat.

SW2 Clear of living quarters.

· 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden

Ej användbar.

· Transport / ytterligare uppgifter:

· ADR

· Begränsade mängder (LQ) 1L

· Reducerade mängder (EQ) Kod: E2

Högsta nettomängd per innerförpackning: 30 ml

Högsta nettomängd per ytterförpackning: 500 ml

· Transportkategori 2

· Tunnelrestriktionskod D/E

· IMDG

· Limited quantities (LQ) 1L

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1247 METYLMETAKRYLAT, MONOMER, STABILISERAD, LÖSNING, 3, II

AVSNITT 15: Gällande föreskrifter

· 15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö

· Direktiv 2012/18/EU

· Namngivna farliga ämnen - BILAGA I Inga beståndsdelar är listade.

· Seveso-kategorier P5c BRANDFARLIGA VÄTSKOR

· Tröskelvärden (i ton) för tillämpning av krav för lägre nivå 5.000 t

· Tröskelvärden (i ton) för tillämpning av krav för övre nivå 50.000 t

· Förordning (EG) nr 1907/2006 BILAGA XVII Villkor: 3

(Fortsättning på sida 8)

SE

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 20.01.2022

Omarbetad: 20.01.2022

Handelsnamn: TECHNOVIT 9100 LIQUID NEW

(Fortsättning från sida 7)

· **Direktiv 2011/65/EU om begränsning av användning av vissa farliga ämnen i elektrisk och elektronisk utrustning - Bilaga II**

Inga beståndsdelar är listade.

· **FÖRORDNING (EU) 2019/1148**

· **Bilaga I - SPRÄNGÄMNESPREKURSORER SOM OMFATTAS AV RESTRIKTIONER (Övre gränsvärde för beviljande av tillstånd enligt artikel 5.3)**

Inga beståndsdelar är listade.

· **Bilaga II - SPRÄNGÄMNESPREKURSORER SOM OMFATTAS AV RAPPORTERINGSKRAV**

Inga beståndsdelar är listade.

· **Förordning (EG) nr 273/2004 om narkotikaprekursorer**

Inga beståndsdelar är listade.

· **Förordning (EG) nr 111/2005 om regler för övervakning av handeln med narkotikaprekursorer mellan gemenskapen och tredjeländer**

Inga beståndsdelar är listade.

· **15.2 Kemikaliesäkerhetsbedömning:** En kemikaliesäkerhetsbedömning har ej gjorts.

AVSNITT 16: Annan information

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produkttegenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Relevanta fraser**

H225 Mycket brandfarlig vätska och ånga.

H315 Irriterar huden.

H317 Kan orsaka allergisk hudreaktion.

H335 Kan orsaka irritation i luftvägarna.

· **Förkortningar och akronymer:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Brandfarliga vätskor – Kategori 2

Skin Irrit. 2: Frätande eller irriterande på huden – Kategori 2

Skin Sens. 1: Hudsensibilisering – Kategori 1

STOT SE 3: Specifik organtoxicitet (enstaka exponering) – Kategori 3