

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

1 Identification

- **Product identifier**
- **Trade name:** MODIFIED ORANGE G STAINING SOLUTION
- **Article number:** 26801-04
- **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

Flammable Liquids 2

Substances and mixtures which, in contact with water, emit flammable gases 1

H225 Highly flammable liquid and vapor.

H260 In contact with water releases flammable gases, which may ignite spontaneously.



GHS08 Health hazard

Carcinogenicity 1A

Specific Target Organ Toxicity - Single Exposure 2

H350 May cause cancer.

H371 May cause damage to the central nervous system and the visual organs.



GHS07

Acute Toxicity - Inhalation 4

H332 Harmful if inhaled.

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



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Ethyl alcohol

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 1)

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapor.

In contact with water releases flammable gases, which may ignite spontaneously.

Harmful if inhaled.

May cause cancer.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Do not allow contact with water.

Handle under inert gas. Protect from moisture.

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

In case of fire: Use CO₂, sand, extinguishing powder to extinguish.

Store in a dry place. Store in a closed container.

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)**



Health = 0

Fire = 3

Reactivity = 2

The substance demonstrates unusual reactivity with water.

· **HMIS-ratings (scale 0 - 4)**



*Health = *0*

Fire = 3

Reactivity = 2

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 2)

3 Composition/information on ingredients

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

· **Dangerous components:**

64-17-5	Ethyl alcohol	>50-≤100%
67-56-1	Methyl Alcohol	>2.5-≤10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
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).
Dispose contaminated material as waste according to item 13.
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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 3)

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:		
64-17-5	Ethyl alcohol	1,800 ppm
67-56-1	Methyl Alcohol	530 ppm
· PAC-2:		
64-17-5	Ethyl alcohol	3300* ppm
67-56-1	Methyl Alcohol	2,100 ppm
· PAC-3:		
64-17-5	Ethyl alcohol	15000* ppm
67-56-1	Methyl Alcohol	7200* ppm

7 Handling and storage

· Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

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.

Keep respiratory protective device available.

· 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:	
64-17-5 Ethyl alcohol	
PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1000 ppm
	A3

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 4)

67-56-1 Methyl Alcohol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 250 ppm

Long-term value: 200 ppm

Skin; BEI

· Ingredients with biological limit values:

67-56-1 Methyl Alcohol

BEI 15 mg/L

Medium: urine

Time: end of shift

Parameter: Methanol (background, nonspecific)

· 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.

Store protective clothing separately.

· 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

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 5)

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Orange
Odor:	Alcohol-like
Odor threshold:	Not determined.

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

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	78 °C (172.4 °F)

- **Flash point:** 13 °C (55.4 °F)

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 425 °C (797 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Spontaneously flammable in air.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

Lower:	3.5 Vol %
Upper:	15 Vol %

- **Vapor pressure at 20 °C (68 °F):** 59 hPa (44.3 mm Hg)

- **Density:** Not determined.

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

- Water: Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

- **Solvent content:**

Organic solvents:	79.0 %
Water:	20.8 %
VOC content:	79.00 %
	997.2 g/l / 8.32 lb/gal

- **Solids content:** 0.0 %

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

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 6)

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** Contact with water releases flammable gases.
- **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:**

67-56-1 Methyl Alcohol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Carcinogenic.

- **Carcinogenic categories**

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

64-17-5	Ethyl alcohol	1
1936-15-8	disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate	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
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION



(Contd. of page 7)

- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1987
· UN proper shipping name	
· DOT	Alcohols, n.o.s. (Ethanol, Methanol)
· ADR	1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)
· IMDG	ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)
· IATA	ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
· 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

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 8)

· Stowage Category	B
· Transport in bulk according to Annex II of MARPOL 73/78 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 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 3, II

15 Regulatory information

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

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

None of the ingredients is listed.

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

67-56-1 Methyl Alcohol

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

64-17-5	Ethyl alcohol	ACTIVE
7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
67-56-1	Methyl Alcohol	ACTIVE
1936-15-8	disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate	ACTIVE

· **Hazardous Air Pollutants**

67-56-1 Methyl Alcohol

· **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:**

64-17-5 Ethyl alcohol

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 9)

67-56-1	Methyl Alcohol
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

64-17-5	Ethyl alcohol	A3
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· **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

GHS08

· **Signal word** Danger

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

Ethyl alcohol

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapor.

In contact with water releases flammable gases, which may ignite spontaneously.

Harmful if inhaled.

May cause cancer.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Do not allow contact with water.

Handle under inert gas. Protect from moisture.

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

In case of fire: Use CO₂, sand, extinguishing powder to extinguish.

Store in a dry place. Store in a closed container.

Store in a well-ventilated place. Keep cool.

Store locked up.

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 10)

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

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **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 preparation / last revision** 06/10/2022 / -

· **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

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Substances and mixtures which, in contact with water, emit flammable gases 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Acute Toxicity - Inhalation 4: Acute toxicity – Category 4

Carcinogenicity 1A: Carcinogenicity – Category 1A

Specific Target Organ Toxicity - Single Exposure 2: Specific target organ toxicity (single exposure) – Category 2

Safety Data Sheet

according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

1 Identification

- **Product identifier**
- **Trade name:** MODIFIED ORANGE G STAINING SOLUTION
- **Article number:** 26801-04
- **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.

Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.



GHS08 health hazard

Carc. 1A H350 May cause cancer.

STOT SE 2 H371 May cause damage to the central nervous system and the visual organs.



GHS07

(Contd. on page 2)

-AU

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 1)

Acute Tox. 4 H332 Harmful if inhaled.

· **Label elements**

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

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** *Danger*

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

Ethyl alcohol

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

In contact with water releases flammable gases which may ignite spontaneously.

Harmful if inhaled.

May cause cancer.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

Handle and store contents under inert gas. Protect from moisture.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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.

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor if you feel unwell.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

In case of fire: Use CO₂, sand, extinguishing powder for extinction.

Store in a dry place. Store in a closed container.

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.

AU

(Contd. on page 3)

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 2)

3 Composition and Information on Ingredients

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

· Dangerous components:		
64-17-5	Ethyl alcohol	>50-≤100%
67-56-1	Methyl Alcohol	>2.5-≤10%
· SVHC		
64-17-5	Ethyl alcohol	
67-56-1	Methyl Alcohol	

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

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
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).
Dispose contaminated material as waste according to item 13.

(Contd. on page 4)

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 3)

- 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.
- Open and handle receptacle with care.
- Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
- Keep ignition sources away - Do not smoke.
- Protect from heat.
- Protect against electrostatic charges.
- Keep respiratory protective device available.
- **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 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:**

64-17-5 Ethyl alcohol

WES	Long-term value: 1880 mg/m ³ , 1000 ppm
-----	--

67-56-1 Methyl Alcohol

WES	Short-term value: 328 mg/m ³ , 250 ppm
	Long-term value: 262 mg/m ³ , 200 ppm
	Sk

- **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.
- Store protective clothing separately.

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 4)

- **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

9 Physical and Chemical Properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Orange
Odour:	Alcohol-like
Odour threshold:	Not determined.

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

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	78 °C

- **Flash point:** 13 °C

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

- **Ignition temperature:** 425 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Spontaneously flammable in air.

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

- **Explosion limits:**

Lower:	3.5 Vol %
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(Contd. on page 6)

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 5)

Upper:	15 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	79.0 %
Water:	20.8 %
VOC (EC)	79.00 %
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** Contact with water releases flammable gases.
- **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:**

67-56-1 Methyl Alcohol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **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:

Harmful
Carcinogenic.

(Contd. on page 7)

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 6)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. 1A


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.

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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|-------------------------------------|---|
| · UN-Number | |
| · ADG, IMDG, IATA | UNI987 |
| · UN proper shipping name | |
| · ADG | 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) |
| · IMDG | ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) |
| · IATA | ALCOHOLS, N.O.S. (ETHANOL, METHANOL) |
| · Transport hazard class(es) | |
| · ADG, IMDG, IATA | |
| |  |
| · Class | 3 Flammable liquids. |
| · Label | 3 |

(Contd. on page 8)

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 7)

· Packing group · ADG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D B
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG · 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 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 3, II

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**

67-56-1 Methyl Alcohol

S5, S6

· **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

GHS08

· **Signal word** Danger

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

Ethyl alcohol

Methyl Alcohol

(Contd. on page 9)

-AU

Safety Data Sheet according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 8)

· **Hazard statements**

Highly flammable liquid and vapour.
In contact with water releases flammable gases which may ignite spontaneously.
Harmful if inhaled.
May cause cancer.
May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Handle and store contents under inert gas. Protect from moisture.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
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.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor if you feel unwell.
Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
In case of fire: Use CO₂, sand, extinguishing powder for extinction.
Store in a dry place. Store in a closed container.
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**

O2 Substances and mixtures which in contact with water emit flammable gases
P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5	Ethyl alcohol
67-56-1	Methyl Alcohol

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

AU

(Contd. on page 10)

Safety Data Sheet

according to WHS Regulations

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(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:**

· **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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Carc. 1A: Carcinogenicity – Category 1A

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

AU

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

1 Identification

- **Product identifier**
- **Trade name:** MODIFIED ORANGE G STAINING SOLUTION
- **Article number:** 26801-04
- **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.

Substances and Mixtures Which, in Contact with Water, Emit Flammable Gases - Category 1

H260 In contact with water releases flammable gases which may ignite spontaneously.



GHS08 Health hazard

Carcinogenicity - Category 1A

H350 May cause cancer.

Specific Target Organ Toxicity - Single Exposure - Category 2

H371 May cause damage to the central nervous system and the visual organs.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

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



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Ethyl alcohol

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 1)

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

In contact with water releases flammable gases which may ignite spontaneously.

Harmful if inhaled.

May cause cancer.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Do not allow contact with water.

Handle and store contents under inert gas. Protect from moisture.

Keep container tightly closed.

Ground and bond container and receiving equipment.

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

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

In case of fire: Use CO₂, sand, extinguishing powder to extinguish.

Store in a dry place. Store in a closed container.

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)**



Health = 0

Fire = 3

Reactivity = 2

The substance demonstrates unusual reactivity with water.

· **HMIS-ratings (scale 0 - 4)**



*Health = *0*

Fire = 3

Reactivity = 2

3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

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

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 2)

· Dangerous components:

64-17-5	Ethyl alcohol	60-80% w/w *
67-56-1	Methyl Alcohol	1-5% w/w *

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Generally the product does not irritate the skin.

· 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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents: Water

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

· Advice for firefighters

· Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

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).

Dispose contaminated material as waste according to item 13.

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.

CA

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 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.
 Keep respiratory protective device available.
- **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:	
64-17-5 Ethyl alcohol	
EL	STEL: 1000 ppm
EV	TWA: 1,900 mg/m ³ , 1,000 ppm
67-56-1 Methyl Alcohol	
EL	STEL: 250 ppm
	TWA: 200 ppm
	Skin
EV	STEL: 325 mg/m ³ , 250 ppm
	TWA: 260 mg/m ³ , 200 ppm
	Skin

- **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.
 Store protective clothing separately.
- **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.

(Contd. on page 5)

CA

Safety Data Sheet according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 4)

· **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:	Liquid
Color:	Orange
Odor:	Alcohol-like
Odor threshold:	Not determined.

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

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	78 °C

· **Flash point:** 13 °C· **Flammability (solid, gaseous):** Not flammable.· **Ignition temperature:** 425 °C· **Decomposition temperature:** Not determined.· **Auto igniting:** Spontaneously flammable in air.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

Lower:	3.5 Vol %
Upper:	15 Vol %

· **Vapor pressure at 20 °C:** 59 hPa

(Contd. on page 6)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 5)

- | | |
|---------------------------|-----------------|
| · Density: | Not determined. |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |

- | | |
|--|-----------------|
| · Solubility in / Miscibility with Water: | Fully miscible. |
|--|-----------------|

- | | |
|---|-----------------|
| · Partition coefficient (n-octanol/water): | Not determined. |
|---|-----------------|

- | | |
|---------------------|-----------------|
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |

- | | |
|---------------------------|--------|
| · Solvent content: | |
| Organic solvents: | 79.0 % |
| Water: | 20.8 % |

- | | |
|------------------------|-------|
| 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** Contact with water releases flammable gases.
- **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: |
|---|

67-56-1 Methyl Alcohol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Carcinogenic.

- **Carcinogenic categories**

- | |
|---|
| · IARC (International Agency for Research on Cancer) |
|---|

64-17-5	Ethyl alcohol	I
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(Contd. on page 7)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 6)

1936-15-8	disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate	3
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· **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|-----------------------------------|--|
| · UN-Number | |
| · DOT/TDG, ADR, IMDG, IATA | UNI987 |
| · UN proper shipping name | |
| · DOT/TDG | <i>Alcohols, n.o.s. (Ethanol, Methanol)</i> |
| · ADR | <i>1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)</i> |
| · IMDG | <i>ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)</i> |
| · IATA | <i>ALCOHOLS, N.O.S. (ETHANOL, METHANOL)</i> |

(Contd. on page 8)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 7)

· **Transport hazard class(es)**· **DOT/TDG (Transport dangerous goods):**

· **Class** 3 Flammable liquids
 · **Label** 3

· **ADR, IMDG, IATA**

· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**· **DOT/TDG, 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** B

· **Transport in bulk according to Annex II of
 MARPOL 73/78 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

· **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 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 3, II

CA
 (Contd. on page 9)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 8)

15 Regulatory information

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

· **Sara**

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

None of the ingredients is listed.

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

67-56-1 Methyl Alcohol

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

64-17-5	Ethyl alcohol	ACTIVE
7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
67-56-1	Methyl Alcohol	ACTIVE
1936-15-8	disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate	ACTIVE

· **Canadian substance listings:**

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

64-17-5	Ethyl alcohol
7732-18-5	Deionized Water, Reagent Grade A.C.S.
67-56-1	Methyl Alcohol
1936-15-8	disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate

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

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

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

67-56-1 Methyl Alcohol

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

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

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

Ethyl alcohol

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

In contact with water releases flammable gases which may ignite spontaneously.

Harmful if inhaled.

May cause cancer.

May cause damage to the central nervous system and the visual organs.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Do not allow contact with water.

(Contd. on page 10)

Safety Data Sheet according to HPR, Schedule 1

Printing date 06/10/2022

Reviewed on 06/10/2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 9)

Handle and store contents under inert gas. Protect from moisture.

Keep container tightly closed.

Ground and bond container and receiving equipment.

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

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

In case of fire: Use CO₂, sand, extinguishing powder to extinguish.

Store in a dry place. Store in a closed container.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **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** 06/10/2022 / -

· **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 10.06.2022

Revision: 10.06.2022

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

- **1.1 Product identifier**
- **Trade name:** MODIFIED ORANGE G STAINING SOLUTION
- **Article number:** 26801-04
- **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.

Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.



health hazard

STOT SE 2 H371 May cause damage to the central nervous system and the visual organs.

- **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 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Methyl Alcohol
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H371 May cause damage to the central nervous system and the visual organs.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 1)

· Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P223 Do not allow contact with water.
- P231+P232 Handle and store contents under inert gas. Protect from moisture.
- 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: 64-17-5	Ethyl alcohol	>50-≤100%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	
CAS: 67-56-1	Methyl Alcohol	>2.5-≤10%
EINECS: 200-659-6	⚠ Flam. Liq. 2, H225; ⚠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

· SVHC

64-17-5	Ethyl alcohol
67-56-1	Methyl Alcohol

- **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
· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Generally the product does not irritate the skin.

· 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.

GB

(Contd. on page 3)

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

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 2)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** *Water*
- **5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*
- **5.3 Advice for firefighters**
- **Protective equipment:** *Mouth respiratory protective device.*

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:**
Dilute with plenty of water.
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).
Dispose contaminated material as waste according to item 13.
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.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **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.*

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 3)

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:**

64-17-5 Ethyl alcohol

WEL	Long-term value: 1920 mg/m ³ , 1000 ppm
-----	--

67-56-1 Methyl Alcohol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
	Sk

- **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.

Store protective clothing separately.

· **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

GB

(Contd. on page 5)

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

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 4)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Liquid
· Colour:	Orange
· Odour:	Alcohol-like
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	78 °C

· Flash point: 13 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 425 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Spontaneously flammable in air.

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

· Explosion limits:

· Lower:	3.5 Vol %
· Upper:	15 Vol %

· Vapour pressure at 20 °C: 59 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Fully miscible.

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

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	79.0 %
· Water:	20.8 %
· VOC (EC)	79.00 %

· 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.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 5)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Contact with water releases flammable gases.
- **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:**

67-56-1 Methyl Alcohol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.
- **STOT-single exposure**
May cause damage to the central nervous system and the visual organs.
- **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.

(Contd. on page 7)

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

Printing date 10.06.2022


Revision: 10.06.2022

Trade name: **MODIFIED ORANGE G STAINING SOLUTION**

(Contd. of page 6)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1987
· 14.2 UN proper shipping name · ADR · IMDG · IATA	1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· 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	Warning: Flammable liquids. 33 F-E,S-D B
· 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

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

(Contd. of page 7)

· **UN "Model Regulation":** UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 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**
O2 Substances and mixtures which in contact with water emit flammable gases
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5	Ethyl alcohol
67-56-1	Methyl Alcohol

- **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.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H370 Causes damage to organs.

- **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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Acute Tox. 4: Acute toxicity – Category 4

(Contd. on page 9)

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

Printing date 10.06.2022

Revision: 10.06.2022

Trade name: MODIFIED ORANGE G STAINING SOLUTION

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

(Contd. of page 8)

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

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

- **1.1 Productidentificatie**
- **Handelsnaam:** MODIFIED ORANGE G STAINING SOLUTION
- **Artikelnummer:** 26801-04
- **UFI:** S1S3-10J4-H003-FAVA
- **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.

Water-react. 1 H260 In contact met water komen ontvlambare gassen vrij die spontaan kunnen ontbranden.



GHS08 gezondheidsgevaar

STOT SE 2 H371 Kan schade veroorzaken aan het centrale zenuwstelsel en de visuele organen.

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

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 1)

Gevarenpictogrammen


GHS02 GHS08

Signaalwoord Gevaar

Gevaaraanduidende componenten voor de etikettering:

methanol

Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.

H260 In contact met water komen ontvlambare gassen vrij die spontaan kunnen ontbranden.

H371 Kan schade veroorzaken aan het centrale zenuwstelsel en de visuele organen.

Veiligheidsaanbevelingen

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

P223 Contact met water vermijden.

P231+P232 Inhoud onder inert gas gebruiken en bewaren. Tegen vocht beschermen.

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: 64-17-5	ethanol	>50-≤100%
EINECS: 200-578-6	Flam. Liq. 2, H225	
CAS: 67-56-1	methanol	>2,5-≤10%
EINECS: 200-659-6	Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

SVHC

64-17-5	ethanol
67-56-1	methanol

Aanvullende gegevens:

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

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 2)

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

· Na het inademen:

Frisse lucht toedienen, eventueel beademing, warmte. Wanneer de klachten niet ophouden, een arts raadplegen. Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Over het algemeen is het produkt niet prikkelend voor de huid

· 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.

· 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, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

· Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn: Water

· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

· 5.3 Advies voor brandweerlieden

· Speciale beschermende kleding: Ademhalingsstoestel aantrekken.

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 Milieuvoorzorgsmaatregelen:

Met veel water verdunnen.

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.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

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.

Tanks voorzichtig openen en behandelen.

Aërosolvorming vermijden.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 3)

- **Informatie m.b.t. brand- en ontploffingsgevaar:**
 - Onststekingsbronnen op afstand houden - niet roken.
 - Beschermen tegen hitte.
 - Maatregelen treffen tegen ontlading van statische elektriciteit.
 - Ademhalingstoestellen gereedhouden.
- **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 zonnestralen 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.

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

64-17-5 ethanol

WGW	Korte termijn waarde: 1900 mg/m ³ , 990 ppm
	Lange termijn waarde: 260 mg/m ³ , 35 ppm

67-56-1 methanol

WGW	Lange termijn waarde: 133 mg/m ³ , 100 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.
 - Beschermende kleding afzonderlijk bewaren.
- **Ademhalingsbescherming:**
 - Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel 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 chemicaliënmengsel 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.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: **MODIFIED ORANGE G STAINING SOLUTION**

(Vervolg van blz. 4)

- **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:	Vloeistof
· Kleur:	Oranje
· Geur:	Alcoholachtig
· Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde:** Niet bepaald.

· Toestandsverandering

· Smelt-/vriespunt:	Niet bepaald.
· Beginkookpunt en kooktraject:	78 °C

· **Flampunt:** 13 °C

· **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

· **Ontstekingstemperatuur:** 425 °C

· **Ontledingstemperatuur:** Niet bepaald.

· **Zelfontbrandingstemperatuur:** Spontaan ontvlambaar in lucht.

· **Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.

· Ontploffingsgrenzen:

· Onderste:	3,5 Vol %
· Bovenste:	15 Vol %

· **Dampspanning bij 20 °C:** 59 hPa

· **Dichtheid:** Niet bepaald.

· **Relatieve dichtheid:** Niet bepaald.

· **Dampdichtheid:** Niet bepaald.

· **Verdampingssnelheid:** Niet bepaald.

· Oplosbaarheid in/mengbaarheid met

· **Water:** Volledig mengbaar.

· **Verdelingscoëfficiënt: n-octanol/water:** Niet bepaald.

· Viscositeit

· Dynamisch:	Niet bepaald.
· Kinematisch:	Niet bepaald.

· Oplosmiddelgehalte:

· **Organisch oplosmiddel:** 79,0 %

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 5)

Water:	20,8 %
VOC (EG)	79,00 %
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** Contact met water maakt brandbare gassen vrij.
- **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.

· Indelingsrelevantie LD/LC50-waarden:

67-56-1 methanol

Oraal	LD50	5.628 mg/kg (rat)
Dermaal	LD50	15.800 mg/kg (rabbit)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **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 schade veroorzaken aan het centrale zenuwstelsel en de visuele organen.
- **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.

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION


(Vervolg van blz. 6)

- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)
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 terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|---|
| · 14.1 VN-nummer | |
| · ADR, IMDG, IATA | UN1987 |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR | 1987 ALCOHOLEN, N.E.G. (ETHANOL (ETHYLALCOHOL), METHANOL) |
| · IMDG | ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) |
| · IATA | ALCOHOLS, N.O.S. (ETHANOL, METHANOL) |
| · 14.3 Transportgevarenklasse(n) | |
| · ADR, IMDG, IATA | |
| |  |
| · klasse | 3 Brandbare vloeistoffen |
| · Etiket | 3 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | II |
| · 14.5 Milieugevaren: | Niet bruikbaar. |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Waarschuwing: Brandbare vloeistoffen |
| · Gevaarsidentificatienummer (Kemler-getal): | 33 |
| · EMS-nummer: | F-E,S-D |
| · Stowage Category | B |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |

(Vervolg op blz. 8)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 7)

· Transport/verdere gegevens:
· ADR
· Beperkte hoeveelheden (LQ)

1L

· Uitgezonderde hoeveelheden (EQ)

Code: E2

Grootste netto hoeveelheid per binnenverpakking: 30 ml

Grootste netto hoeveelheid per buitenverpakking: 500 ml

· Vervoerscategorie

2

· Tunnelbeperkingscode

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

· VN "Model Regulation":

UN 1987 ALCOHOLEN, N.E.G. (ETHANOL (ETHYLALCOHOL), METHANOL), 3, II

RUBRIEK 15: Regelgeving

· 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel
· SZW-lijst van kankerverwekkende stoffen

64-17-5 ethanol

· SZW-lijst van mutagene stoffen

geen der bestanddelen staat op de lijst.

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

64-17-5 ethanol

1A

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

64-17-5 ethanol

1A

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

64-17-5 ethanol

x

· 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

O2 Stoffen en mengsels die in contact met water ontvlambare gassen ontwikkelen

P5c ONTVLAMBARE VLOEISTOFFEN

· Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 100 t
· Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 500 t
· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3, 40, 69

· 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.

(Vervolg op blz. 9)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

(Vervolg van blz. 8)

· **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:**

· **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· **Gevaarklasse v. water:**

Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/reprotoxiciteit/bioaccumulerend vermogen/toxiciteit of persistentie)

· **Aanvullende voorschriften, beperkingen en verbodsverordeningen**

· **Zeer zorgwekkende stoffen (SVHC) volgens REACH, artikel 57**

64-17-5	ethanol
67-56-1	methanol

· **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.

H302 Schadelijk bij inslikken.

H312 Schadelijk bij contact met de huid.

H332 Schadelijk bij inademing.

H370 Veroorzaakt schade aan organen.

· **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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

Water-react. 1: Stoffen en mengsels die in contact met water ontvlambare gassen ontwikkelen – Categorie 1

(Vervolg op blz. 10)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 10.06.2022

Herziening van: 10.06.2022

Handelsnaam: MODIFIED ORANGE G STAINING SOLUTION

Acute Tox. 4: Acute toxiciteit – Categorie 4

STOT SE 1: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 1

STOT SE 2: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 2

(Vervolg van blz. 9)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

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

- **1.1 Identificateur de produit**
- **Nom du produit: MODIFIED ORANGE G STAINING SOLUTION**
- **Code du produit:** 26801-04
- **UFI:** S1S3-10J4-H003-FAVA
- **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.

Water-react. 1 H260 Dégage au contact de l'eau des gaz inflammables qui peuvent s'enflammer spontanément.



GHS08 danger pour la santé

STOT SE 2 H371 Risque présumé d'effets graves pour le système nerveux central et les organes visuels.

- **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



GHS08

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**
méthanol
- **Mentions de danger**
H225 Liquide et vapeurs très inflammables.
H260 Dégage au contact de l'eau des gaz inflammables qui peuvent s'enflammer spontanément.
H371 Risque présumé d'effets graves pour le système nerveux central et les organes visuels.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 1)

· **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.
- P223 Éviter tout contact avec l'eau.
- P231+P232 Manipuler et stocker le contenu sous gaz inerte. Protéger de l'humidité.
- 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/récipient 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: 64-17-5	éthanol	>50-≤100%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	
CAS: 67-56-1	méthanol	>2,5-≤10%
EINECS: 200-659-6	☠ Flam. Liq. 2, H225; ☠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

· **SVHC**

64-17-5	éthanol
67-56-1	méthanol

· **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**

· **Remarques générales:**

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **Après inhalation:**

Donner de l'air frais. Assistance respiratoire si nécessaire. Tenir le malade au chaud. Si les troubles persistent, consulter un médecin.

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

· **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.

· **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.

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(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 2)

RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:**
CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **Produits extincteurs déconseillés pour des raisons de sécurité:** Eau
- **5.2 Dangers particuliers résultant de la substance ou du mélange**
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

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:**
Diluer avec beaucoup d'eau.
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).
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
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.
Ouvrir et manipuler les récipients avec précaution.
Eviter 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.
Tenir des appareils de protection respiratoire prêts.
- **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.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 3)

· **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:**

64-17-5 éthanol

VLEP	Valeur momentanée: 9500 mg/m ³ , 5000 ppm Valeur à long terme: 1900 mg/m ³ , 1000 ppm
------	--

67-56-1 méthanol

VLEP	Valeur momentanée: 1300 mg/m ³ , 1000 ppm Valeur à long terme: 260 mg/m ³ , 200 ppm risque de pénétration percutanée, (11)
------	--

- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Équipement 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.
Conserver à part les vêtements de protection.
- **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.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 4)

· **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:	Orange
· Odeur:	Genre alcool
· 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:	78 °C

· **Point d'éclair** 13 °C

· **Inflammabilité (solide, gaz):** Non applicable.

· **Température d'inflammation:** 425 °C

· **Température de décomposition:** Non déterminé.

· **Température d'auto-inflammabilité:** Spontanément inflammable à l'air.

· **Propriétés explosives:** Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.

· **Limites d'explosion:**

· Inférieure:	3,5 Vol %
· Supérieure:	15 Vol %

· **Pression de vapeur à 20 °C:** 59 hPa

· **Densité:** Non déterminée.

· **Densité relative:** Non déterminé.

· **Densité de vapeur:** Non déterminé.

· **Taux d'évaporation:** Non déterminé.

· **Solubilité dans/miscibilité avec l'eau:**

Entièrement miscible

· **Coefficient de partage: n-octanol/eau:** Non déterminé.

· **Viscosité:**

· Dynamique:	Non déterminé.
· Cinématique:	Non déterminé.

· **Teneur en solvants:**

· Solvants organiques:	79,0 %
· Eau:	20,8 %
· VOC (CE)	79,00 %

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 5)

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** Un contact avec l'eau provoque la libération de gaz combustibles.
- **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:**

67-56-1 méthanol

Oral	LD50	5.628 mg/kg (rat)
Dermique	LD50	15.800 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **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**
Risque présumé d'effets graves pour le système nerveux central et les organes visuels.
- **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.

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION


(suite de la page 6)

- **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.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

<ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA 	UN1987
<ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG · IATA 	1987 ALCOOLS, N.S.A. (ÉTHANOL (ALCOOL ÉTHYLIQUE), MÉTHANOL) ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
<ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Classe · Étiquette
<ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA 	3 Liquides inflammables. 3 II
<ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: 	Non applicable.
<ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Numéro d'identification du danger (Indice Kemler): · No EMS: · Stowage Category 	Attention: Liquides inflammables. 33 F-E,S-D B
<ul style="list-style-type: none"> · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC 	Non applicable.

(suite page 8)

Fiche de données de sécurité
selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: **MODIFIED ORANGE G STAINING SOLUTION**

(suite de la page 7)

· **Indications complémentaires de transport:**· **ADR**· **Quantités limitées (LQ)**

1L

· **Quantités exceptées (EQ)**

Code: E2

Quantité maximale nette par emballage intérieur: 30 ml
Quantité maximale nette par emballage extérieur: 500 ml· **Catégorie de transport**

2

· **Code de restriction en tunnels**

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· **"Règlement type" de l'ONU:**

UN 1987 ALCOOLS, N.S.A. (ÉTHANOL (ALCOOL ÉTHYLIQUE), MÉTHANOL), 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**

O2 Substances et mélanges qui, au contact de l'eau, dégagent des gaz inflammables

P5c LIQUIDES INFLAMMABLES

· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 100 t· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 500 t· **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3, 40, 69

· **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.

(suite page 9)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 10.06.2022

Révision: 10.06.2022

Nom du produit: MODIFIED ORANGE G STAINING SOLUTION

(suite de la page 8)

· **Prescriptions nationales:**

· **Indications sur les restrictions de travail:**

Le personnel ne doit pas être exposé aux substances dangereuses cancérogènes contenues dans cette préparation.
Les autorités peuvent autoriser des exceptions dans des cas particuliers.

· **Autres prescriptions, restrictions et règlements d'interdiction**

· **Substances extrêmement préoccupantes (SVHC) selon REACH, article 57**

64-17-5	éthanol
67-56-1	méthanol

· **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.

H302 Nocif en cas d'ingestion.

H312 Nocif par contact cutané.

H332 Nocif par inhalation.

H370 Risque avéré d'effets graves pour les organes.

· **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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquides inflammables – Catégorie 2

Water-react. 1: Substances et mélanges qui, au contact de l'eau, dégagent des gaz inflammables – Catégorie 1

Acute Tox. 4: Toxicité aiguë – Catégorie 4

STOT SE 1: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 1

STOT SE 2: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 2

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

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

- **1.1 Produktidentifikator**
- **Handelsname:** MODIFIED ORANGE G STAINING SOLUTION
- **Artikelnummer:** 26801-04
- **UFI:** SIS3-10J4-H003-FAVA
- **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
- **Auskunftgebender Bereich:** 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.

Water-react. 1 H260 In Berührung mit Wasser entstehen entzündbare Gase, die sich spontan entzünden können.



GHS08 Gesundheitsgefahr

STOT SE 2 H371 Kann das zentrale Nervensystem und die Sehorgane schädigen.

- **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: 10.06.2022

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Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 1)

Gefahrenpiktogramme


GHS02 GHS08

Signalwort Gefahr
Gefahrbestimmende Komponenten zur Etikettierung:

Methanol

Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.

H260 In Berührung mit Wasser entstehen entzündbare Gase, die sich spontan entzünden können.

H371 Kann das zentrale Nervensystem und die Sehorgane schädigen.

Sicherheitshinweise

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

P223 Keinen Kontakt mit Wasser zulassen.

P231+P232 Inhalt unter inertem Gas handhaben und aufbewahren. Vor Feuchtigkeit schützen.

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: 64-17-5	Ethanol	>50-≤100%
EINECS: 200-578-6	Flam. Liq. 2, H225	
CAS: 67-56-1	Methanol	>2,5-≤10%
EINECS: 200-659-6	Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

SVHC

64-17-5	Ethanol
67-56-1	Methanol

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
Allgemeine Hinweise:

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 2)

- **Nach Einatmen:**
Frischluftzufuhr, gegebenenfalls Atemspende, Wärme. Bei anhaltenden Beschwerden Arzt konsultieren.
Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.
- **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.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**
Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:**
Mit viel Wasser verdünnen.
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.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
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.
Behälter mit Vorsicht öffnen und handhaben.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
Atemschutzgeräte bereithalten.

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 3)

- **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):**
Stoffe oder Gemische, die bei Berührung mit Wasser entzündbare Gase abgeben
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

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:**

64-17-5 Ethanol

AGW	Langzeitwert: 380 mg/m ³ , 200 ml/m ³ 4(II);DFG, Y
-----	---

67-56-1 Methanol

AGW	Langzeitwert: 130 mg/m ³ , 100 ml/m ³ 2(II);DFG, EU, H, Y
-----	--

- **Bestandteile mit biologischen Grenzwerten:**

67-56-1 Methanol

BGW	30 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Methanol
-----	---

- **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.

Getrennte Aufbewahrung der Schutzkleidung.

- **Atemschutz:**

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

- **Handschutz:**



Schutzhandschuhe

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 4)

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

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

· **Form:** Flüssigkeit

· **Farbe:** Orange

· **Geruch:** Alkoholartig

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· **Zustandsänderung**

· **Schmelzpunkt/Gefrierpunkt:** Nicht bestimmt.

· **Siedebeginn und Siedebereich:** 78 °C

· **Flammpunkt:** 13 °C

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

· **Zündtemperatur:** 425 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Selbstentzündlich an der Luft.

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

· **Explosionsgrenzen:**

· **Untere:** 3,5 Vol %

· **Obere:** 15 Vol %

· **Dampfdruck bei 20 °C:** 59 hPa

· **Dichte:** Nicht bestimmt.

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 5)

· Löslichkeit in / Mischbarkeit mit Wasser:	Vollständig mischbar.
· Verteilungskoeffizient: n-Octanol/Wasser:	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.
· Lösemittelgehalt:	
Organische Lösemittel:	79,0 %
Wasser:	20,8 %
VOC (EU)	79,00 %
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.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Kontakt mit Wasser setzt brennbare Gase frei.
- **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:		
67-56-1 Methanol		
Oral	LD50	5.628 mg/kg (rat)
Dermal	LD50	15.800 mg/kg (rabbit)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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 das zentrale Nervensystem und die Sehorgane schädigen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 6)

· **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.

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.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|---|
| · 14.1 UN-Nummer | |
| · ADR, IMDG, IATA | UN1987 |
| · 14.2 Ordnungsgemäße UN-Versandbezeichnung | |
| · ADR | 1987 ALKOHOLE, N.A.G. (ETHANOL (ETHYLALKOHOL), METHANOL) |
| · IMDG | ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) |
| · IATA | ALCOHOLS, N.O.S. (ETHANOL, METHANOL) |
| · 14.3 Transportgefahrenklassen | |
| · ADR, IMDG, IATA | |
| |  |
| · Klasse | 3 Entzündbare flüssige Stoffe |
| · Gefahrzettel | 3 |
| · 14.4 Verpackungsgruppe | |
| · ADR, IMDG, IATA | II |

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 7)

· 14.5 Umweltgefahren:	Nicht anwendbar.
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender	Achtung: Entzündbare flüssige Stoffe
· Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):	33
· EMS-Nummer:	F-E,S-D
· Stowage Category	B
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	Nicht anwendbar.
· Transport/weitere Angaben:	
· ADR	
· Begrenzte Menge (LQ)	1L
· Freigestellte Mengen (EQ)	Code: E2 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 500 ml
· Beförderungskategorie	2
· Tunnelbeschränkungscode	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 1987 ALKOHOLE, N.A.G. (ETHANOL (ETHYLALKOHOL), METHANOL), 3, II

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**
O2 Stoffe und Gemische, die bei Berührung mit Wasser entzündbare Gase entwickeln
P5c ENTZÜNDBARE FLÜSSIGKEITEN
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 100 t
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 500 t
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3, 40, 69
- **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.

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 10.06.2022

überarbeitet am: 10.06.2022

Handelsname: MODIFIED ORANGE G STAINING SOLUTION

(Fortsetzung von Seite 8)

· 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:
· Hinweise zur Beschäftigungsbeschränkung:

Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

· Technische Anleitung Luft:

Klasse	Anteil in %
Wasser	20,8
I	4,0
NK	75,1

· Wassergefährdungsklasse: WGK 1 (Selbsteinstufung): schwach wassergefährdend.

· Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen
· Besonders besorgniserregende Stoffe (SVHC) gemäß REACH, Artikel 57

64-17-5 Ethanol

67-56-1 Methanol

· 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.

H302 Gesundheitsschädlich bei Verschlucken.

H312 Gesundheitsschädlich bei Hautkontakt.

H332 Gesundheitsschädlich bei Einatmen.

H370 Schädigt die Organe.

· 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2

Water-react. 1: Stoffe und Gemische, die in Berührung mit Wasser entzündbare Gase entwickeln – Kategorie 1

Acute Tox. 4: Akute Toxizität – Kategorie 4

STOT SE 1: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 1

STOT SE 2: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 2

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** MODIFIED ORANGE G STAINING SOLUTION
- **Articolo numero:** 26801-04
- **UFI:** S1S3-10J4-H003-FAVA
- **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.

Water-react. 1 H260 A contatto con l'acqua libera gas infiammabili che possono infiammarsi spontaneamente.



GHS08 pericolo per la salute

STOT SE 2 H371 Può provocare danni al sistema nervoso centrale e gli organi visivi.

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



GHS02 GHS08

(continua a pagina 2)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 1)

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**

metanolo

· **Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.

H260 A contatto con l'acqua libera gas infiammabili che possono infiammarsi spontaneamente.

H371 Può provocare danni al sistema nervoso centrale e gli organi visivi.

· **Consigli di prudenza**

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

P223 Evitare qualunque contatto con l'acqua.

P231+P232 Manipolare e conservare in atmosfera di gas inerte. Tenere al riparo dall'umidità.

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: 64-17-5	etanolo	>50-≤100%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	
CAS: 67-56-1	metanolo	>2,5-≤10%
EINECS: 200-659-6	☠ Flam. Liq. 2, H225; ☠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

· **SVHC**

64-17-5	etanolo
67-56-1	metanolo

· **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**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare in zona ben areata, praticare eventualmente la respirazione artificiale, tenere al caldo. Se i disturbi persistono consultare il medico.

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

· **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

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

· **Ingestione:** Se il dolore persiste consultare il medico.

(continua a pagina 3)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 2)

- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **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, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.
- **Mezzi di estinzione inadatti per motivi di sicurezza:** 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:** Indossare il respiratore.

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:**
Diluire abbondantemente con acqua.
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).
Smaltimento del materiale contaminato conformemente al punto 13.
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.
Aprire e manipolare i recipienti con cautela.
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.
Tener pronto il respiratore.
- **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.

(continua a pagina 4)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 3)

· **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.

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

64-17-5 etanolo

TWA	Valore a breve termine: 1884 mg/m ³ , 1000 ppm
A3	

67-56-1 metanolo

TWA	Valore a breve termine: 328 mg/m ³ , 250 ppm
	Valore a lungo termine: 262 mg/m ³ , 200 ppm
	Cute, IBE
VL	Valore a lungo termine: 260 mg/m ³ , 200 ppm
	Cute

· **Componenti con valori limite biologici:**

67-56-1 metanolo

IBE	15 mg/l
	Campioni: urine
	Momento del prelievo: a fine turno
	Indicatore biologico: metanolo

· **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.
- Custodire separatamente l'equipaggiamento protettivo.

· **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.

(continua a pagina 5)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 4)

· **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:	Arancione
----------------	-----------

· **Odore:** Simile all'alcool· **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:	78 °C
---	-------

· **Punto di infiammabilità:** 13 °C· **Infiammabilità (solidi, gas):** Non applicabile.· **Temperatura di accensione:** 425 °C· **Temperatura di decomposizione:** Non definito.· **Temperatura di autoaccensione:** Spontaneamente infiammabile all'aria.· **Proprietà esplosive:** Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.· **Limiti di infiammabilità:**

Inferiore:	3,5 Vol %
-------------------	-----------

Superiore:	15 Vol %
-------------------	----------

· **Tensione di vapore a 20 °C:** 59 hPa· **Densità:** Non definito.· **Densità relativa** Non definito.· **Densità di vapore:** Non definito.· **Velocità di evaporazione** Non definito.· **Solubilità in/Miscibilità con acqua:**

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.· **Viscosità:**

Dinamica:	Non definito.
------------------	---------------

Cinematica:	Non definito.
--------------------	---------------

· **Tenore del solvente:**

Solventi organici:	79,0 %
---------------------------	--------

Acqua:	20,8 %
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(continua a pagina 6)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 5)

VOC (CE)	79,00 %
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** Il contatto con acqua libera gas infiammabili.
- **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.

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:**

67-56-1 metanolo

Orale	LD50	5.628 mg/kg (rat)
Cutaneo	LD50	15.800 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **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 provocare danni al sistema nervoso centrale e gli organi visivi.
- **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.

(continua a pagina 7)

IT

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION


(Segue da pagina 6)

- **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.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|---|
| · 14.1 Numero ONU
· ADR, IMDG, IATA | UN1987 |
| · 14.2 Nome di spedizione dell'ONU
· ADR
· IMDG
· IATA | 1987 ALCOLI, N.A.S. (ETANOLO (ALCOL ETILICO), METANOLO)
ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)
ALCOHOLS, N.O.S. (ETHANOL, METHANOL) |
| · 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 | Attenzione: Liquidi infiammabili
33
F-E,S-D
B |
| · 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC | Non applicabile. |

(continua a pagina 8)

IT

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 7)

· Trasporto/ulteriori indicazioni:

· ADR

· **Quantità limitate (LQ)**

1L

· **Quantità esenti (EQ)**

Codice: E2

Quantità massima netta per imballaggio interno: 30 ml

Quantità massima netta per imballaggio esterno: 500 ml

· **Categoria di trasporto**

2

· **Codice di restrizione in galleria**

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 1987 ALCOLI, N.A.S. (ETANOLO (ALCOL ETILICO), METANOLO), 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**

O2 Sostanze e miscele che, a contatto con l'acqua, liberano gas infiammabili, categoria I

P5c LIQUIDI INFIAMMABILI

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 100 t**

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 500 t**

· **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 40, 69

· **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.

(continua a pagina 9)

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

Stampato il: 10.06.2022

Revisione: 10.06.2022

Denominazione commerciale: MODIFIED ORANGE G STAINING SOLUTION

(Segue da pagina 8)

· **Disposizioni nazionali:**

· **Indicazioni relative alla limitazione delle attività lavorative:**

Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.

· **Istruzione tecnica aria:**

Classe	quota in %
NC	79,0

· **Ulteriori disposizioni, limitazioni e decreti proibitivi**

· **Sostanze estremamente preoccupanti (SVHC) ai sensi della regolamento REACH, articolo 57**

64-17-5	etanolo
67-56-1	metanolo

· **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.

· **Frasei rilevanti**

H225 Liquido e vapori facilmente infiammabili.

H302 Nocivo se ingerito.

H312 Nocivo per contatto con la pelle.

H332 Nocivo se inalato.

H370 Provoca danni agli organi.

· **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

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquidi infiammabili – Categoria 2

Water-react. 1: Sostanze e miscele che, a contatto con l'acqua, sviluppano gas infiammabili – Categoria 1

Acute Tox. 4: Tossicità acuta – Categoria 4

STOT SE 1: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 1

STOT SE 2: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 2

물질안전보건자료 GHS에 따라

인쇄일자: 2022.06.10

개정: 2022.06.10

1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: **MODIFIED ORANGE G STAINING SOLUTION**
- 상품번호: 26801-04
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도
- 제품의 권고 용도와 사용상의 제한: MODIFIED ORANGE G STAINING SOLUTION
- 제품의 권고 용도와 사용상의 제한: 실험실 화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:
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.
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- 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 획득 가능: Product safety department
- 비상연락 전화번호:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

- 순물질 또는 혼합물의 분류



화염

인화성 액체 – 구분2

H225 고인화성 액체 및 증기

물반응성 물질 및 혼합물 – 구분1

H260 물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킴



건강에 위험

발암성 – 구분1A

H350 암을 일으킬 수 있음

특정표적장기 독성 - 1회 노출- 구분2 H371 중추 신경계 그리고 시각 기관 을 손상시킬 수 있다.

- 라벨표기 요소

· **GHS 라벨 요소** 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(2 쪽에 계속)

물질안전보건자료 GHS에 따라

인쇄일자: 2022.06.10

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제품명: MODIFIED ORANGE G STAINING SOLUTION

(1 쪽부터계속)

· GHS 그림문자



GHS02 GHS08

· 신호어 위험

· 상표상에 명확히 위험성이 표시된 성분:

메틸알코올

· 유해·위험문구

고인화성 액체 및 증기

물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킬

암을 일으킬 수 있음

중추 신경계 그리고 시각 기관 을 손상시킬 수 있다.

· 예방조치문구

열·스파크·화염·고열로부터 멀리하십시오 - 금연

격렬한 반응 및 화재의 가능성이 있으므로 물과 접촉하지 않게 하십시오.

불활성 기체 하에서 취급하고, 습기를 방지하십시오.

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.

· 기타 유해성

· PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과

· PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.

· vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

· 설명: 무해한 점 가 물 이 함유된 아래에 열 거 된 물 질 로 만 들 어 진 혼 합 물.

· 위험 요소:

64-17-5	Ethyl alcohol ⚠ 인화성 액체 - 구분2, H225	>50-≤100%
67-56-1	메틸알코올 ⚠ 인화성 액체 - 구분2, H225; ⚠ 특정표적장기 독성 - 1회 노출- 구분1, H370; ⚠ 급성 독성 - 경구 - 구분4, H302; 급성 독성 - 경피 - 구분4, H312; 급성 독성 - 흡입 - 구분4, H332	>2.5-≤10%

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

중 독 증 상 은 몇 시 간 이 지 난 뒤 에 발 생 할 수 있 다. 따 라 서 사 고 가 발 생 한 후 에 적 어 도 48 시 간 동 안 은 의 료 진 의 관 찰 을 받 아 야 한 다.

· 흡입했을 때:

신 선 한 공 기 를 쐬 고, 필 요 할 경 우 에 는 산 소 호 흡 기 의 도 움 을 받 는 다. 환 자 를 따 뜻 하 게 하 고, 증 상 이 지 속 될 경 우 에 는 의 료 진 의 도 움 을 구 한 다.

환자 가 의 식 을 잃 었 을 경 우 에 는 안 전 한 자 세 에 서 환 자 를 운 반 한 다.

· 피부에 접촉했을 때: 일반적으로 이 제품은 피부에 자극적이지 않다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어낸다.

· 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.

(3 쪽에계속)

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(2 쪽부터 계속)

- 기타 의사의 주의사항:
- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제: 이 산 화 탄 소, 진 화 용 석 회 가 루 또 는 물 방 사 를 사용 하고, 더 큰 화재는 물 을 분 사 하 거 나 알 코 올 이 함 유 된 거 품 으 로 끈 다.
- 부적절한 소화제: 물
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비설치.

6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 안전 장비 착용하고, 무 방 비 의 사 람 은 격 리 시 킨 다.
- 환경 관련 예방조치: 많은 물로 희석시킨다.
하수도망/해수면위의물/지하수로도달하지않게한다.
- 밀폐 및 정화 방법과 소재: 액 체 가 혼 합 된 물 질 (모 래, 규 조 토, 산 성 결 합 물, 일 반 결 합 물, 톱 밥)에 흡입되도록 한다.
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
물 이 나 묽 은 세 척 제 로 씻 어 내 지 마 십 시 오
- 타 섹션 참조
안 전 관 리 에 대 한 정 보 는 제 7 장 을 참 고 하 시 오.
개 인 보 호 장 비 에 대 한 정 보 는 제 8 장 을 참 고 하 시 오.
쓰 레 기 처 리 에 대 한 정 보 는 제 13 장 을 참 고 하 시 오.

7 취급 및 저장방법

- 취급:
- 안전 취급을 위한 예방조치
작업장에서는통풍이잘되고/습기제거가잘되게주의한다.
조심스럽게용기를개봉하거나취급한다.
연무질이형성되는것을피한다.
- 화재 및 폭발 사고 예방대책에 관한 정보:
발 화 요 소 는 멀 리 둔 다-금 연.
열로부터보호한다.
정 전 기 의 충 전 으 로 부 터 보 호 한 다.
호흡보호장비를항상비치한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
- 안전한 저장 방법: 차 가 운 장 소 에 보 관 한 다.
- 하나의 공동 보관 시설에 대한 보관 관련 정보: 필 요 없 음
- 보 관 조 건 에 관 한 추 가 적 인 정 보:
용기를새지않게밀폐한채보관한다.
밀폐된 용기속에서늘하고건조하게보관한다.
열이나직사광선으로부터보호한다.

(4 쪽에 계속)

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(3 쪽부터계속)

· 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

· 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

64-17-5 Ethyl alcohol

OELV (KR)	장기간의값: 1000 ppm 발암성 1A
PEL (US)	장기간의값: 1900 mg/m ³ , 1000 ppm
REL (US)	장기간의값: 1900 mg/m ³ , 1000 ppm
TLV (US)	단기간의값: 1000 ppm A3

67-56-1 메틸알코올

OELV (KR)	단기간의값: 250 ppm 장기간의값: 200 ppm Skin
IOELV (EU)	장기간의값: 260 mg/m ³ , 200 ppm Skin
PEL (US)	장기간의값: 260 mg/m ³ , 200 ppm
REL (US)	단기간의값: 325 mg/m ³ , 250 ppm 장기간의값: 260 mg/m ³ , 200 ppm Skin
TLV (US)	단기간의값: 250 ppm 장기간의값: 200 ppm Skin; BEI

· 생물학적 허용값을 갖는 원료:

67-56-1 메틸알코올

BEI (US)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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· 추 가 정보: 제 조 할 당시에 유 효 한 목 록을 기초로 사용했다.

· 노출 통제

· 개인 보호구

· 일반적보호조치및위생조치:

· 식 료 품, 음 료 수와 사 료로 부터 멀 리 떨 어 뜨 려 놓 는 다.

· 더 러 워 지 거 나 음 료 수 가 묻 은 옷 은 즉 시 탈 의 한 다.

· 휴 식 전 이 나 작 업이 끝 날 때 마다 손 을 씻 는 다.

· 방 호 복 은 따 로 보 관 한 다.

· 호흡기 보호:

· 단 시 간 또 는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또 는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.

(5 쪽에계속)

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(4 쪽부터계속)

· 손 보호:



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율과저하를고려해서 장갑 재료를 선택한다.

· 장갑의재료

적합한장갑의선택은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다 .
제품은다양한재료로부터의조제로이루어지는것이기때문에 , 장갑재질의안정성은사전에예측되어질수있는것이아니고 ,
반드시사용전에 (그안전성이) 체크되어야한다.

· 장갑 재료의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· 눈 보호:



꼭조이는보안경

9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보

· 일반정보

· 외형

· 물리적 상태:	액체
· 색:	오렌지색
· 냄새:	알코올종류의
· 후각역치	알맞지않다.

· pH: 알맞지않다.

· 상태변화

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	78 °C

· 인화점: 13 °C

· 인화성(고체, 기체): 해당사항 없음.

· 점화온도: 425 °C

· 분해 온도: 알맞지않다.

· 자기점화: 공기중에서자연발화하는

· 폭발위험: 이제품은폭발위험성이없지만 ,
폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.

· 인화 또는 폭발 범위의 상한/하한

· 아래로:	3.5 Vol %
· 위로:	15 Vol %

· 증기압 의경우 20 °C: 59 hPa

· 밀도:	맞지않는다.
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.

(6 쪽에계속)

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GHS에 따라

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(5 쪽부터계속)

· 증발 속도:	알맞지않다.
· 용해도:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
역학성:	알맞지않다.
동점성:	알맞지않다.
· 용매내용물	
유기용매:	79.0 %
물:	20.8 %
VOC (EU)	79.00 %
· 고체의 함량:	0.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 물과접촉시인화성가스가방출된다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
67-56-1 메틸알코올		
구강의	LD50	5,628 mg/kg (rat)
피부의	LD50	15,800 mg/kg (rabbit)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 무자극
- 심한 눈 손상 또는 자극성: 무자극.
- 감각화: 민감한영향이없는것으로알려져있다.
- 추가적인 독성에 관한 정보:
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.
건강에해로운
암을유발하는
- 다음 종류의 잠재적인 효과에 대한 정보
- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)
발암성 – 구분1A

KR

(7 쪽에계속)

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(6 쪽부터계속)


12 환경에 미치는 영향

- 독성
- 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 특징:
 - 수질오염등급 1 (자체등급분류): 약하게수질오염이된
 - 희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1987
· UN 적정 선적명 · ADR · IMDG · IATA	1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL) ALCOHOLS, N.O.S. (ETHANOL, METHANOL)
· 교통 위험 클래스 · ADR, IMDG, IATA <div style="text-align: center;">  </div>	3 발화성용액 3
· 용기등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치	경고: 발화성용액

(8 쪽에계속)

물질안전보건자료
GHS에 따라

인쇄일자: 2022.06.10

개정: 2022.06.10

제품명: MODIFIED ORANGE G STAINING SOLUTION

(7 쪽부터계속)

· 위험 코드:	33
· EMS-번호:	F-E,S-D
· Stowage Category	B
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR	
· 한정 수량 (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· 운송 구분	2
· 터널 제한 코드	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 "모범 규제":	UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL), 3, II

15 법적 규제현황

· 산업안전보건법에 의한 규제:

· 제조 등 금지물질:	어떠한내용물도 목록화되어있지않다	
· 허가대상물질:	어떠한내용물도 목록화되어있지않다	
· 관리대상유해물질:	67-56-1 메틸알코올	
· 작업환경측정 대상 유해인자	67-56-1 메틸알코올	1A28
· 특수건강진단 대상 유해인자	67-56-1 메틸알코올	1A31
· 해당 운물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률		
· Korean Existing Chemical Inventory		
64-17-5 Ethyl alcohol		KE-13217
7732-18-5 물		KE-35400
67-56-1 메틸알코올		KE-23193
1936-15-8 disodium 7-hydroxy-8-phenylazonaphthalene-1,3-disulphonate		KE-06640
· 화학물질관리법		
· 사고대비물질		
67-56-1 메틸알코올		

(9 쪽에계속)

물질안전보건자료 GHS에 따라

인쇄일자: 2022.06.10

개정: 2022.06.10

제품명: MODIFIED ORANGE G STAINING SOLUTION

(8 쪽부터계속)

· 금지물질	어떠한내용물도목록화되어있지않다
· 제한물질	어떠한내용물도목록화되어있지않다
· 유독물질	67-56-1 메틸알코올
· 허가물질	67-56-1 메틸알코올
· 위험물안전관리법 (위험물 및 지정수량) 제 4: 400 리터	
· 등록 또는 신고 면제대상 화학물질	7732-18-5 물
· ‘21년까지 등록하여야 할 압, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질	
어떠한내용물도목록화되어있지않다	
· 중점관리물질의 지정	
· 표1 중점관리물질(제2조 관련)	어떠한내용물도목록화되어있지않다
· 표2 중점관리물질(제2조 관련)	어떠한내용물도목록화되어있지않다

· **GHS 라벨 요소** 본 제품은 화학물질의 분류 및 표기에 관한 국제제화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **GHS 그림문자**



GHS02 GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

메틸알코올

· **유해·위험문구**

고인화성 액체 및 증기

물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킴

압을 일으킬 수 있음

중추 신경계 그리고 시각 기관 을 손상시킬 수 있다.

· **예방조치문구**

열·스파크·화염·고열로부터 멀리하시오 - 금연

격렬한 반응 및 화재의 가능성이 있으므로 물과 접촉하지 않게 하시오.

불활성 기체 하에서 취급하고, 습기를 방지하시오.

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하시오. 피부를 물로 씻으시오/샤워하시오 .

밀봉하여 저장하시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하시오.

· **국내규정:**

· **사용제한에 대한 정보:**

노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다

개별적인경우에관청은예외를허가할수있다.

(10 쪽에계속)

물질안전보건자료

GHS에 따라

인쇄일자: 2022.06.10

개정: 2022.06.10

제품명: MODIFIED ORANGE G STAINING SOLUTION

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

(9 쪽부터계속)

16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다
 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

· **담당자:**

· **최초 작성일자:** 2022.06.10

· **개정 횟수 및 최종 개정일자:** 1 / 2022.06.10

· **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

KR

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

- **1.1 Identificador del producto**
- **Nombre comercial:** MODIFIED ORANGE G STAINING SOLUTION
- **Número del artículo:** 26801-04
- **UFI:** S1S3-10J4-H003-FAVA
- **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.

Water-react. 1 H260 En contacto con el agua desprende gases inflamables que pueden inflamarse espontáneamente.



GHS08 peligro para la salud

STOT SE 2 H371 Puede provocar daños en el sistema nervioso central y los órganos visuales.

- **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 10.06.2022

Revisión: 10.06.2022

Nombre comercial: **MODIFIED ORANGE G STAINING SOLUTION**

(se continua en página 1)

· **Pictogramas de peligro**

GHS02 GHS08

· **Palabra de advertencia Peligro**· **Componentes peligrosos a indicar en el etiquetaje:**

metanol

· **Indicaciones de peligro**

H225 Líquido y vapores muy inflamables.

H260 En contacto con el agua desprende gases inflamables que pueden inflamarse espontáneamente.

H371 Puede provocar daños en el sistema nervioso central y los órganos visuales.

· **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.

P223 Evitar el contacto con el agua.

P231+P232 Manipular y almacenar el contenido en un medio de gas inerte. Proteger de la humedad.

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: 64-17-5	etanol	>50-≤100%
EINECS: 200-578-6	Flam. Liq. 2, H225	
CAS: 67-56-1	metanol	>2,5-≤10%
EINECS: 200-659-6	Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	

· **SVHC**

64-17-5	etanol
67-56-1	metanol

· **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**· **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: MODIFIED ORANGE G STAINING SOLUTION

(se continua en página 2)

- **En caso de inhalación del producto:**
Suministrar aire fresco; eventualmente hacer respiración artificial, calor. Si los trastornos persisten, consultar al médico.
Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
- **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.
- **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.
- **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, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.
- **Sustancias extintoras inapropiadas por razones de seguridad:** Agua
- **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:** Colocarse la protección respiratoria.

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:**
Diluir con mucha agua.
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).
Desechar el material contaminado como vertido según ítem 13.
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.
Abrir y manejar el recipiente con cuidado.
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.
Tener preparados los aparatos respiratorios.

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: **MODIFIED ORANGE G STAINING SOLUTION**

(se continua en página 3)

- **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.

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:**

64-17-5 etanol

LEP Valor de corta duración: 1910 mg/m³, 1000 ppm
s

67-56-1 metanol

LEP Valor de larga duración: 266 mg/m³, 200 ppm
vía dérmica, VLB, VLI, r

- **Componentes con valores límite biológicos:**

67-56-1 metanol

VLB 15 mg/l
Muestra: orina
Momento de Muestero: Final de la jornada laboral
Indicador Biológico: Metanol

- **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.

Guardar la ropa protectora por separado.

- **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

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: MODIFIED ORANGE G STAINING SOLUTION

(se continua en página 4)

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

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

· Forma:	Líquido
· Color:	Anaranjado
· Olor:	Similar al del alcohol
· 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:	78 °C

· **Punto de inflamación:** 13 °C

· **Inflamabilidad (sólido, gas):** No aplicable.

· **Temperatura de ignición:** 425 °C

· **Temperatura de descomposición:** No determinado.

· **Temperatura de auto-inflamación:** Se inflama espontáneamente en contacto con el aire.

· **Propiedades explosivas:** El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

· **Límites de explosión:**

· Inferior:	3,5 Vol %
· Superior:	15 Vol %

· **Presión de vapor a 20 °C:** 59 hPa

· Densidad:	Indeterminado.
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.

· **Solubilidad en / miscibilidad con agua:** Completamente mezclable.

· **Coeficiente de reparto: n-octanol/agua:** No determinado.

· **Viscosidad:**
· **Dinámica:** No determinado.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: **MODIFIED ORANGE G STAINING SOLUTION**

(se continua en página 5)

Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	79,0 %
Agua:	20,8 %
VOC (CE)	79,00 %
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.
- **10.3 Posibilidad de reacciones peligrosas** Al entrar en contacto con agua se liberan gases inflamables.
- **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:**

67-56-1 metanol

Oral	LD50	5.628 mg/kg (rat)
Dermal	LD50	15.800 mg/kg (rabbit)

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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 provocar daños en el sistema nervioso central y los órganos visuales.
- **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.

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: MODIFIED ORANGE G STAINING SOLUTION

(se continua en página 6)

- **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.

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.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

· **14.1 Número ONU**

· **ADR, IMDG, IATA**

UN1987

· **14.2 Designación oficial de transporte de las Naciones Unidas**

· **ADR**

1987 ALCOHOLES, N.E.P. (ETANOL (ALCOHOL ETÍLICO), METANOL)

· **IMDG**

ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), METHANOL)

· **IATA**

ALCOHOLS, N.O.S. (ETHANOL, METHANOL)

· **14.3 Clase(s) de peligro para el transporte**

· **ADR, IMDG, IATA**



· **Clase**

3 Líquidos inflamables

· **Etiqueta**

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**

Atención: Líquidos inflamables

· **Número de identificación de peligro (Número**

Kemler):

33

· **Número EMS:**

F-E,S-D

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: MODIFIED ORANGE G STAINING SOLUTION

(se continua en página 7)

· Stowage Category	B
· 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)	1L
· Cantidades exceptuadas (EQ)	Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml
· Categoría de transporte	2
· Código de restricción del túnel	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
· "Reglamentación Modelo" de la UNECE:	UN 1987 ALCOHOLES, N.E.P. (ETANOL (ALCOHOL ETÍLICO), METANOL), 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**
O2 Sustancias y mezclas que, en contacto con el agua, desprenden gases inflamables
P5c LÍQUIDOS INFLAMABLES
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 100 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 500 t
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII** Restricciones: 3, 40, 69

- **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

(se continua en página 9)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 10.06.2022

Revisión: 10.06.2022

Nombre comercial: MODIFIED ORANGE G STAINING SOLUTION

(se continua en página 8)

· **Disposiciones nacionales:**

· **Indicaciones sobre las limitaciones de trabajo:**

Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.

· **Demás disposiciones, limitaciones y decretos prohibitivos**

· **Sustancias altamente preocupantes (SVHC) según REACH, artículo 57**

64-17-5	etanol
67-56-1	metanol

· **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.

H302 Nocivo en caso de ingestión.

H312 Nocivo en contacto con la piel.

H332 Nocivo en caso de inhalación.

H370 Provoca daños en los órganos.

· **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

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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Líquidos inflamables – Categoría 2

Water-react. 1: Sustancias y mezclas que, en contacto con el agua, desprenden gases inflamables – Categoría 1

Acute Tox. 4: Toxicidad aguda – Categoría 4

STOT SE 1: Toxicidad específica en determinados órganos (exposición única) – Categoría 1

STOT SE 2: Toxicidad específica en determinados órganos (exposición única) – Categoría 2