

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

1 Identification

- **Product identifier**
- **Trade name:** ACRYLIC PLASTIC CASTING (HARDENER)
- **Article number:** 24210-H
- **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**



GHS06 Skull and crossbones

Acute Toxicity - Oral 3 H301 Toxic if swallowed.

Acute Toxicity - Dermal 1 H310 Fatal in contact with skin.



GHS05 Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.

Eye Damage 1 H318 Causes serious eye damage.

Flammable Liquids 4 H227 Combustible liquid.

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



GHS05 GHS06

- **Signal word** Danger
- **Hazard-determining components of labeling:**
 dimethyl phthalate
 2-Butanone, peroxide
- **Hazard statements**
 Combustible liquid.
 Toxic if swallowed.
 Fatal in contact with skin.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 1)

Causes severe skin burns and eye damage.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

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

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

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

If swallowed: Rinse mouth. Do NOT induce vomiting.

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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off immediately all contaminated clothing and wash it before reuse.

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

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 = 4

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 2

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

131-11-3	dimethyl phthalate	>25-≤50%
1338-23-4	2-Butanone, peroxide	>25-≤50%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 2)

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air. Immediately call a 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.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

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

· **PAC-1:**

131-11-3	dimethyl phthalate	15 mg/m ³
1338-23-4	2-Butanone, peroxide	1.8 ppm

· **PAC-2:**

131-11-3	dimethyl phthalate	1,600 mg/m ³
1338-23-4	2-Butanone, peroxide	20 ppm

· **PAC-3:**

131-11-3	dimethyl phthalate	9300* mg/m ³
1338-23-4	2-Butanone, peroxide	22 ppm

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: **ACRYLIC PLASTIC CASTING (HARDENER)**

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

131-11-3 dimethyl phthalate

PEL	Long-term value: 5 mg/m ³
REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³

1338-23-4 2-Butanone, peroxide

REL	Ceiling limit value: 1.5 mg/m ³ , 0.2 ppm
TLV	Ceiling limit value: 0.2 ppm

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

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

- **Breathing equipment:**

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

- **Protection of hands:**



Protective gloves

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

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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 4)

· **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:	Clear
Odor:	Pungent
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	81 °C (177.8 °F)

· **Flash point:** 75 °C (167 °F)

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

· **Ignition temperature:** 555 °C (1,031 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

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

· **Viscosity:**

Dynamic: Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 5)

Kinematic:	Not determined.
Solvent content:	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal
Solids content:	0.0 %
Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

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

LD/LC50 values that are relevant for classification:		
131-11-3 dimethyl phthalate		
Oral	LD50	6,800 mg/kg (rat)
Dermal	LD50	>10 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Corrosive
Irritant
Very toxic
Danger through skin absorption.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
NTP (National Toxicology Program)
None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 6)

- **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.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

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

14 Transport information

- | | |
|---|--|
| UN-Number | UN2810 |
| DOT, ADR, IMDG, IATA | |
| UN proper shipping name | Toxic, liquids, organic, n.o.s. (dimethyl phthalate, 2-Butanone, peroxide) |
| DOT | |
| ADR | |
| IMDG, IATA | |
| Transport hazard class(es) | |
| DOT | |
|  | |
| Class | 6.1 Toxic substances |

(Contd. on page 8)

Safety Data Sheet


acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: **ACRYLIC PLASTIC CASTING (HARDENER)**

(Contd. of page 7)

· Label	6.1
· ADR, IMDG, IATA	
	
· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, ADR, IMDG, IATA	I
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Toxic substances
· Hazard identification number (Kemler code):	66
· EMS Number:	F-A,S-A
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· ADR	
· Excepted quantities (EQ)	Code: E5 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 300 ml
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E5 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (DIMETHYL PHTHALATE, 2-BUTANONE, PEROXIDE), 6.1, I

15 Regulatory information

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

· **Sara**

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

None of the ingredients is listed.

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

131-11-3 dimethyl phthalate

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

All components have the value ACTIVE.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/31/2023

Reviewed on 01/31/2023

Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 8)

· **Hazardous Air Pollutants**

131-11-3	dimethyl phthalate
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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

131-11-3	dimethyl phthalate	D
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· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **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**



GHS05 GHS06

· **Signal word** *Danger*

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

dimethyl phthalate
2-Butanone, peroxide

· **Hazard statements**

Combustible liquid.
Toxic if swallowed.
Fatal in contact with skin.
Causes severe skin burns and eye damage.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.
Do not breathe dusts or mists.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
Specific treatment (see on this label).
If swallowed: Rinse mouth. Do NOT induce vomiting.
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.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

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Trade name: ACRYLIC PLASTIC CASTING (HARDENER)

(Contd. of page 9)

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Take off immediately all contaminated clothing and wash it before reuse.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

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

16 Other information

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

· **Contact:**

· **Date of preparation / last revision** 01/31/2023

· **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

Flammable Liquids 4: Flammable liquids – Category 4

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Acute Toxicity - Dermal 1: Acute toxicity – Category 1

Skin Corrosion 1B: Skin corrosion/irritation – Category 1B

Eye Damage 1: Serious eye damage/eye irritation – Category 1