



# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/28/2021

Reviewed on 12/28/2021

## 1 Identification

- **Product identifier**
- **Trade name: Thermosoft**
- **Application of the substance / the mixture** UV-curing acrylate/methacrylate formulation
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Dreve Otoplastik GmbH  
Max-Planck-Straße 31  
59423 Unna / Germany  
Tel.: +49 2303 / 8807-0  
Fax.: +49 2303 / 8807-29
- **Information department:**  
Department Research & Development  
Fax.: +49 2303 8807-562  
Email: sicherheitsdatenblatt@dreve.de
- **Emergency telephone number:**  
Tel.: +49 211 797-3350  
Plant Fire Department Henkel

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

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

methyl methacrylate  
2-ethylhexyl acrylate  
Diurethandimethacrylat

- **Hazard statements**

Highly flammable liquid and vapor.  
Causes skin irritation.  
May cause an allergic skin reaction.

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May cause respiratory irritation.

- **Precautionary statements**

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

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

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

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

Store locked up.

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

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 3

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:**

|            |                        |        |
|------------|------------------------|--------|
| 80-62-6    | methyl methacrylate    | 10-25% |
| 103-11-7   | 2-ethylhexyl acrylate  | 10-25% |
| 72869-86-4 | Diurethandimethacrylat | ≤2.5%  |

- **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:** Immediately remove any clothing soiled by the product.

- **After inhalation:**

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

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

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Do not induce vomiting.

Call a doctor immediately.

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- **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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid contact with skin and eyes.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
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.
- **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:**

|            |                        |                       |
|------------|------------------------|-----------------------|
| 80-62-6    | methyl methacrylate    | 17 ppm                |
| 103-11-7   | 2-ethylhexyl acrylate  | 15 ppm                |
| 72869-86-4 | Diurethandimethacrylat | 120 mg/m <sup>3</sup> |

- **PAC-2:**

|            |                        |                         |
|------------|------------------------|-------------------------|
| 80-62-6    | methyl methacrylate    | 120 ppm                 |
| 103-11-7   | 2-ethylhexyl acrylate  | 120 ppm                 |
| 72869-86-4 | Diurethandimethacrylat | 1,300 mg/m <sup>3</sup> |

- **PAC-3:**

|            |                        |                         |
|------------|------------------------|-------------------------|
| 80-62-6    | methyl methacrylate    | 570 ppm                 |
| 103-11-7   | 2-ethylhexyl acrylate  | 150 ppm                 |
| 72869-86-4 | Diurethandimethacrylat | 7,900 mg/m <sup>3</sup> |

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### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid contact with skin and eyes.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Protect from heat and direct sunlight.  
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.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

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

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

#### 80-62-6 methyl methacrylate

|      |                                                                                                      |
|------|------------------------------------------------------------------------------------------------------|
| PEL  | Long-term value: 410 mg/m <sup>3</sup> , 100 ppm                                                     |
| REL  | Long-term value: 410 mg/m <sup>3</sup> , 100 ppm                                                     |
| TLV  | Short-term value: 410 mg/m <sup>3</sup> , 100 ppm<br>Long-term value: 205 mg/m <sup>3</sup> , 50 ppm |
| DSEN |                                                                                                      |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Do not inhale fumes.  
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

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Protective gloves should be changed regularly, especially after intensive contact with the product. For every workplace a suitable type of protective gloves must be selected.

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

- **Material of gloves**

Butyl rubber, BR

As there are many different conditions in every day work these indications can only serve as an aid to orientation for the selection of suitable gloves for the handling of chemical products. By no means they can replace qualifying examinations by the end-user.

These recommendations only apply to the product mentioned in the safety data sheet. When mixing with other substances or under conditions deviant from norm EN 374 a manufacturer of CE-approved gloves should be referred to.

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.

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

|               |                                 |
|---------------|---------------------------------|
| <b>Form:</b>  | Fluid                           |
| <b>Color:</b> | Different according to coloring |

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

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

- **Change in condition**

|                                     |                   |
|-------------------------------------|-------------------|
| <b>Melting point/Melting range:</b> | Undetermined.     |
| <b>Boiling point/Boiling range:</b> | 101 °C (213.8 °F) |

- **Flash point:** 10 °C (50 °F)

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

- **Ignition temperature:** 245 °C (473 °F)

- **Decomposition temperature:** Not determined.

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

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|                                                   |                                                                                            |
|---------------------------------------------------|--------------------------------------------------------------------------------------------|
| · <b>Danger of explosion:</b>                     | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>Explosion limits:</b>                        |                                                                                            |
| <b>Lower:</b>                                     | 0.8 Vol %                                                                                  |
| <b>Upper:</b>                                     | 12.5 Vol %                                                                                 |
| · <b>Oxidizing properties</b>                     | Not determined<br>Not applicable.                                                          |
| · <b>Vapor pressure at 20 °C (68 °F):</b>         | 47 hPa (35.3 mm Hg)                                                                        |
| · <b>Density at 20 °C (68 °F):</b>                | 1.05 g/cm <sup>3</sup> (8.76225 lbs/gal)                                                   |
| · <b>Relative density</b>                         | Not determined.                                                                            |
| · <b>Vapor density</b>                            | Not determined.                                                                            |
| · <b>Evaporation rate</b>                         | Not determined.                                                                            |
| · <b>Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix.                                                          |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.                                                                            |
| · <b>Viscosity:</b>                               |                                                                                            |
| <b>Dynamic:</b>                                   | Not determined.                                                                            |
| <b>Kinematic:</b>                                 | Not determined.                                                                            |
| · <b>Other information</b>                        | No further relevant information available.                                                 |

## 10 Stability and reactivity

- **Reactivity** No dangerous reactions if used according to specifications
- **Chemical stability** Stable if used according to specifications
- **Thermal decomposition / conditions to be avoided:**  
Protect from heat and direct sunlight.  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Reacts with reducing agents.  
Reacts with heavy metals.  
Reacts with strong oxidizing agents.  
Reacts with peroxides and other radical forming substances.
- **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:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

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- **Carcinogenic categories**

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

|          |                       |   |
|----------|-----------------------|---|
| 80-62-6  | methyl methacrylate   | 3 |
| 103-11-7 | 2-ethylhexyl acrylate | 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:**

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.

Disposal must be made according to official regulations.

- **Uncleaned packagings:**

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

## 14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN1247

- **UN proper shipping name**

- **DOT**

- **ADR**

Methyl methacrylate monomer, stabilized solution  
 1247 METHYL METHACRYLATE MONOMER,  
 STABILIZED solution  
 1247 METHYLMETHACRYLAT, MONOMER,  
 STABILISIERT, LÖSUNG

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· **IMDG, IATA**METHYL METHACRYLATE MONOMER,  
STABILIZED solution· **Transport hazard class(es)**· **DOT**· **Class**

3 Flammable liquids

· **Label**

3

· **ADR, IMDG, IATA**· **Class**

3 Flammable liquids

· **Label**

3

· **Packing group**· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards:**· **Marine pollutant:**

No

· **Special precautions for user**

Warning: Flammable liquids

· **Danger code (Kemler):**

339

· **EMS Number:**

F-E,S-D

· **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:**· **ADR**· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **IMDG**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**UN 1247 METHYL METHACRYLATE MONOMER,  
STABILIZED SOLUTION, 3, II

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### 15 Regulatory information

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

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

None of the ingredient is listed.

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

80-62-6 | methyl methacrylate

- **TSCA (Toxic Substances Control Act):** All ingredients are listed.

- **Hazardous Air Pollutants**

80-62-6 | methyl methacrylate

- **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.

- **Carcinogen categories**

- **EPA (Environmental Protection Agency)**

80-62-6 | methyl methacrylate

E, NL

- **TLV (Threshold Limit Value established by ACGIH)**

80-62-6 | methyl methacrylate

A4

- **MAK (German Maximum Workplace Concentration)**

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**



GHS02 GHS07

- **Signal word** Danger

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

methyl methacrylate

2-ethylhexyl acrylate

Diurethandimethacrylat

- **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

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May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

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

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

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

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

Store locked up.

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

- **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.

- **Department issuing SDS:** Department Research & Development

- **Contact:** Dr. Thomas Veit, Lothar Sutor, Susanne Weber

- **Date of preparation / last revision** 12/28/2021 / 3

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists

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)

HMS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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

Skin Sens. 1: Skin sensitisation – Category 1

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

- **\* Data compared to the previous version altered.**

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