

**Trade name:** Marlotherm LH**Product no.:** 5009232**Current version :** 2.1.0, issued: 21.10.2021**Replaced version:** 2.0.1, issued: 21.06.2021**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Marlotherm LH**

Substance name benzyltoluene  
REACH registration no. 01-2119488215-34

**Identification numbers**

CAS no. 27776-01-8  
EC no. 248-654-8

**1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses of the substance or mixture**

heat transfer fluids

**Uses advised against**

No data available.

**Reference to relevant exposure scenarios**

For an overview of the exact titles of the relevant exposure scenarios please refer to section 16 of this SDS.

**1.3 Details of the supplier of the safety data sheet****Address**

Krahn Chemie Deutschland GmbH  
Grimm 10  
20457 Hamburg  
Deutschland

Telephone no. +49 40 320 92-0  
Fax no. +49 40 320 92-322

**Information provided by / telephone**

+49 40 320 92-0

**Advice on Safety Data Sheet**

msds@krahn.eu

**1.4 Emergency telephone number**

For medical advice (in German and English):

+49 551 192 40 (Giftinformationszentrum Nord)

In case of transport incidents and other emergencies:

+44 (0)1235 239 670 (NCEC, National Chemical Emergency Centre)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Aquatic Chronic 2; H411

Asp. Tox. 1; H304

Repr. 1B; H360FD

Skin Irrit. 2; H315

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)****Product identifier**

27776-01-8 (benzyltoluene)

**Hazard pictograms**

GHS07



GHS08



GHS09

**Signal word**

Danger

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H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H360FD May damage fertility. May damage the unborn child.  
 H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

P201 Obtain special instructions before use.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P331 Do NOT induce vomiting.  
 P405 Store locked up.  
 P501 Dispose of contents/container to a facility in accordance with local/regional/national/international regulations.

**Supplemental label elements**

"Restricted to professional users"

**2.3 Other hazards**

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

PBT assessment

The components of this product are not considered to be a PBT.

vPvB assessment

The components of this product are not considered to be a vPvB.

**SECTION 3: Composition/information on ingredients****3.1 Substances****Chemical characterization**

Substance name benzyltoluene

**Identification numbers**

CAS no. 27776-01-8

EC no. 248-654-8

**Components to be mentioned according to Regulation (EU) No. 1907/2006, Annex II, section 3.1**

| Substance name                        | Additional information |     |
|---------------------------------------|------------------------|-----|
| CAS / EC / Index / REACH no           | Concentration          | %   |
| dibenzylbenzene, ar-methyl derivative | impurity               |     |
| 53585-53-8                            | < 1.00                 | wt% |
| 258-649-2                             |                        |     |
| -                                     |                        |     |
| -                                     |                        |     |

**3.2 Mixtures**

Not applicable. The product is not a mixture.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

**After inhalation**

Ensure supply of fresh air. Remove affected person from the immediate area.

**After skin contact**

In case of contact with skin wash off immediately with soap and water.

**After eye contact**

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

**After ingestion**

Call a doctor immediately. Do not induce vomiting - aspiration hazard. Never give anything by mouth to an unconscious person. In case of vomiting keep head of person in face-down position to prevent penetration of vomitus into the trachea.

**4.2 Most important symptoms and effects, both acute and delayed****Effects**

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

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No data available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Dry chemical extinguisher; Water mist; Carbon dioxide

**Unsuitable extinguishing media**

High power water jet

**5.2 Special hazards arising from the substance or mixture**In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); Hydrocarbons; benzene**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing. Cool endangered containers with water spray jet. Run-off water from fire fighting must not be discharged into drains or enter surface water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid contact with eyes and clothing. High risk of slipping due to leakage/spillage of product.

**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

**6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

**6.3 Methods and material for containment and cleaning up**

Take up with absorbent material (e.g., sand, kieselguhr, universal binder). When collected, handle material as described under the section heading "Disposal considerations".

**6.4 Reference to other sections**

No data available.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

Provide good ventilation at the work area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn. Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances. Observe information on personal protection equipment (see section 8).

**General protective and hygiene measures**

Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and after work. Avoid contact with eyes and skin. Do not inhale vapours. Remove soiled or soaked clothing immediately.

**Advice on protection against fire and explosion**

Keep away from sources of heat and ignition. Vapours can form an explosive mixture with air. Take precautionary measures against static charges.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures and storage conditions**

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

**Requirements for storage rooms and vessels**

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Appropriate Material

stainless steel; steel

**Incompatible products**

Do not store together with: oxidizing agents

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection**

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| No | Substance name    |                     |          | CAS / EC no             |
|----|-------------------|---------------------|----------|-------------------------|
|    | Route of exposure | Exposure time       | Effect   | Value                   |
| 1  | benzyltoluene     |                     |          | 27776-01-8<br>248-654-8 |
|    | dermal            | Long term (chronic) | systemic | 7.00 mg/kg/day          |
|    | inhalative        | Long term (chronic) | systemic | 4.93 mg/m <sup>3</sup>  |

**DNEL value (consumer)**

| No | Substance name    |                     |          | CAS / EC no             |
|----|-------------------|---------------------|----------|-------------------------|
|    | Route of exposure | Exposure time       | Effect   | Value                   |
| 1  | benzyltoluene     |                     |          | 27776-01-8<br>248-654-8 |
|    | oral              | Long term (chronic) | systemic | 0.25 mg/kg/day          |
|    | dermal            | Long term (chronic) | systemic | 2.50 mg/kg/day          |
|    | inhalative        | Long term (chronic) | systemic | 0.87 mg/m <sup>3</sup>  |

**PNEC values**

| No | Substance name                |                       | CAS / EC no             |
|----|-------------------------------|-----------------------|-------------------------|
|    | ecological compartment        | Type                  | Value                   |
| 1  | benzyltoluene                 |                       | 27776-01-8<br>248-654-8 |
|    | water                         | fresh water sediment  | 331.00 µg/kg            |
|    | with reference to: dry weight |                       |                         |
|    | water                         | marine water sediment | 33.10 µg/kg             |
|    | with reference to: dry weight |                       |                         |

**8.2 Exposure controls****Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal protective equipment****Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol, vapour and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

**Eye / face protection**

Safety glasses with side protection shield (EN 166)

**Hand protection**

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material fluorinated rubber

Material thickness 0.4 mm

Breakthrough time > 480 min

**Other**

Make sure when selecting personal protective equipment (PPE), that it is suitable for the activity, workplace conditions in which it will be used according to the applying European CEN standards and upon consultation with the PPE supplier. Chemical-resistant work clothes.

**Environmental exposure controls**

No data available.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

|                             |
|-----------------------------|
| <b>State of aggregation</b> |
| liquid                      |
| <b>Form/Colour</b>          |
| liquid                      |
| colourless                  |
| <b>Odour</b>                |
| weak                        |

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|                                                          |                           |            |           |
|----------------------------------------------------------|---------------------------|------------|-----------|
| <b>pH value</b>                                          |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Boiling point / boiling range</b>                     |                           |            |           |
| Value                                                    | 280                       | -          | 290 °C    |
| Method                                                   | DIN 53171                 |            |           |
| <b>Melting point/freezing point</b>                      |                           |            |           |
| Value                                                    | -80                       | -          | -70 °C    |
| Method                                                   | OECD 102                  |            |           |
| <b>Decomposition temperature</b>                         |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Flash point</b>                                       |                           |            |           |
| Value                                                    | 137                       | °C         |           |
| Method                                                   | Pensky-Martens closed cup |            |           |
| <b>Ignition temperature</b>                              |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Auto-ignition temperature</b>                         |                           |            |           |
| Value                                                    | 510                       | °C         |           |
| Method                                                   | DIN 51794                 |            |           |
| <b>Flammability</b>                                      |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Lower explosion limit</b>                             |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Upper explosion limit</b>                             |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Vapour pressure</b>                                   |                           |            |           |
| Value                                                    | <                         | 0.01       | hPa       |
| Reference temperature                                    |                           | 20         | °C        |
| <b>Relative vapour density</b>                           |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Relative density</b>                                  |                           |            |           |
| Value                                                    | 0.995                     |            |           |
| Reference temperature                                    | 20                        | °C         |           |
| <b>Density</b>                                           |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Solubility in water</b>                               |                           |            |           |
| Value                                                    | <                         | 0.1        | mg/l      |
| Reference temperature                                    |                           | 20         | °C        |
| <b>Solubility</b>                                        |                           |            |           |
| No data available                                        |                           |            |           |
| <b>Partition coefficient n-octanol/water (log value)</b> |                           |            |           |
| No                                                       | Substance name            | CAS no.    | EC no.    |
| 1                                                        | benzyltoluene             | 27776-01-8 | 248-654-8 |
| log Pow                                                  | 4.31                      | -          | 4.40      |
| Reference temperature                                    |                           | 20         | °C        |
| Method                                                   | OECD 117                  |            |           |
| Source                                                   | ECHA                      |            |           |
| <b>Viscosity</b>                                         |                           |            |           |
| Value                                                    | 4                         | mm²/s      |           |
| Reference temperature                                    | 20                        | °C         |           |
| Type                                                     | kinematic                 |            |           |
| <b>Particle characteristics</b>                          |                           |            |           |
| No data available                                        |                           |            |           |

**9.2 Other information****Other information**

No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

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Dangerous reactions are not expected if the product is handled according to its intended use.

**10.2 Chemical stability**

Stable under recommended storage and handling conditions (See section 7).

**10.3 Possibility of hazardous reactions**

Dangerous reactions are not to be expected when handling product according to its intended use. Vapours may form an explosive mixture with air.

**10.4 Conditions to avoid**

Protect from heat and direct sunlight. UV-light

**10.5 Incompatible materials**

Oxidizing agents

**10.6 Hazardous decomposition products**

Hydrocarbons; Benzene

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

| Acute oral toxicity |                |            |                  |
|---------------------|----------------|------------|------------------|
| No                  | Substance name | CAS no.    | EC no.           |
| 1                   | benzyltoluene  | 27776-01-8 | 248-654-8        |
| LD50                | >              | 2000       | mg/kg bodyweight |
| Species             | rat            |            |                  |
| Source              | ECHA           |            |                  |

| Acute dermal toxicity |  |  |  |
|-----------------------|--|--|--|
| No data available     |  |  |  |

| Acute inhalational toxicity |  |  |  |
|-----------------------------|--|--|--|
| No data available           |  |  |  |

| Skin corrosion/irritation |                |            |           |
|---------------------------|----------------|------------|-----------|
| No                        | Substance name | CAS no.    | EC no.    |
| 1                         | benzyltoluene  | 27776-01-8 | 248-654-8 |
| Species                   | rabbit         |            |           |
| Method                    | OECD 404       |            |           |
| Source                    | ECHA           |            |           |
| Evaluation                | irritant       |            |           |

| Serious eye damage/irritation |                |            |           |
|-------------------------------|----------------|------------|-----------|
| No                            | Substance name | CAS no.    | EC no.    |
| 1                             | benzyltoluene  | 27776-01-8 | 248-654-8 |
| Species                       | rabbit         |            |           |
| Method                        | OECD 405       |            |           |
| Source                        | ECHA           |            |           |
| Evaluation                    | non-irritant   |            |           |

| Respiratory or skin sensitisation |                 |            |           |
|-----------------------------------|-----------------|------------|-----------|
| No                                | Substance name  | CAS no.    | EC no.    |
| 1                                 | benzyltoluene   | 27776-01-8 | 248-654-8 |
| Route of exposure                 | Skin            |            |           |
| Species                           | guinea pig      |            |           |
| Method                            | OECD 406        |            |           |
| Source                            | ECHA            |            |           |
| Evaluation                        | non-sensitizing |            |           |

| Germ cell mutagenicity    |                                                                   |            |           |
|---------------------------|-------------------------------------------------------------------|------------|-----------|
| No                        | Substance name                                                    | CAS no.    | EC no.    |
| 1                         | benzyltoluene                                                     | 27776-01-8 | 248-654-8 |
| Source                    | ECHA                                                              |            |           |
| Evaluation/classification | Based on available data, the classification criteria are not met. |            |           |

| Reproduction toxicity |                    |            |            |
|-----------------------|--------------------|------------|------------|
| No                    | Substance name     | CAS no.    | EC no.     |
| 1                     | benzyltoluene      | 27776-01-8 | 248-654-8  |
| Route of exposure     | oral               |            |            |
| NOAEL                 |                    | 120        | mg/kg bw/d |
| Type of examination   | 2 generation study |            |            |
| Species               | rat                |            |            |

| Carcinogenicity |  |  |  |
|-----------------|--|--|--|
|-----------------|--|--|--|

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|                                                                                                                                             |                |                                                                   |           |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------|-----------|
| No data available                                                                                                                           |                |                                                                   |           |
| STOT - single exposure                                                                                                                      |                |                                                                   |           |
| No data available                                                                                                                           |                |                                                                   |           |
| STOT - repeated exposure                                                                                                                    |                |                                                                   |           |
| No                                                                                                                                          | Substance name | CAS no.                                                           | EC no.    |
| 1                                                                                                                                           | benzyltoluene  | 27776-01-8                                                        | 248-654-8 |
| Source                                                                                                                                      |                | ECHA                                                              |           |
| Evaluation/classification                                                                                                                   |                | Based on available data, the classification criteria are not met. |           |
| Aspiration hazard                                                                                                                           |                |                                                                   |           |
| In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation. |                |                                                                   |           |

**11.2 Information on other hazards****Endocrine disrupting properties**

Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above.

**Other information**

No data available.

**SECTION 12: Ecological information****12.1 Toxicity**

| <b>Toxicity to fish (acute)</b>      |                |            |           |
|--------------------------------------|----------------|------------|-----------|
| No data available                    |                |            |           |
| <b>Toxicity to fish (chronic)</b>    |                |            |           |
| No data available                    |                |            |           |
| <b>Toxicity to Daphnia (acute)</b>   |                |            |           |
| No data available                    |                |            |           |
| <b>Toxicity to Daphnia (chronic)</b> |                |            |           |
| No data available                    |                |            |           |
| <b>Toxicity to algae (acute)</b>     |                |            |           |
| No data available                    |                |            |           |
| <b>Toxicity to algae (chronic)</b>   |                |            |           |
| No data available                    |                |            |           |
| <b>Bacteria toxicity</b>             |                |            |           |
| No                                   | Substance name | CAS no.    | EC no.    |
| 1                                    | benzyltoluene  | 27776-01-8 | 248-654-8 |
| EC10                                 |                | >          | 990       |
| Duration of exposure                 |                | 5          | mg/l      |
| Source                               |                | ECHA       | h         |

**12.2 Persistence and degradability**

| <b>Biodegradability</b> |                |                          |           |
|-------------------------|----------------|--------------------------|-----------|
| No                      | Substance name | CAS no.                  | EC no.    |
| 1                       | benzyltoluene  | 27776-01-8               | 248-654-8 |
| Type                    |                | aerobic biodegradation   |           |
| Value                   |                | appr.                    | 46        |
| Duration                |                | 29                       | %         |
| Source                  |                | ECHA                     | day(s)    |
| Evaluation              |                | inherently biodegradable |           |

**12.3 Bioaccumulative potential**

| Bioconcentration factor (BCF)                     |                |                  |           |
|---------------------------------------------------|----------------|------------------|-----------|
| No                                                | Substance name | CAS no.          | EC no.    |
| 1                                                 | benzyltoluene  | 27776-01-8       | 248-654-8 |
| BCF                                               |                | 344              |           |
| Source                                            |                | calculated value |           |
| Partition coefficient n-octanol/water (log value) |                |                  |           |
| No                                                | Substance name | CAS no.          | EC no.    |
| 1                                                 | benzyltoluene  | 27776-01-8       | 248-654-8 |
| log Pow                                           |                | 4.31             | - 4.40    |
| Reference temperature                             |                | 20 °C            |           |
| Method                                            |                | OECD 117         |           |
| Source                                            |                | ECHA             |           |

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No data available.

**12.5 Results of PBT and vPvB assessment**

| Results of PBT and vPvB assessment |                                                                 |
|------------------------------------|-----------------------------------------------------------------|
| PBT assessment                     | The components of this product are not considered to be a PBT.  |
| vPvB assessment                    | The components of this product are not considered to be a vPvB. |

**12.6 Endocrine disrupting properties**

| Endocrine disrupting properties                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above. |

**12.7 Other adverse effects**

No data available.

**12.8 Other information**

| Other information                                          |
|------------------------------------------------------------|
| Do not discharge product unmonitored into the environment. |

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.  
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

**Packaging**

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

**SECTION 14: Transport information****14.1 Transport ADR/RID/ADN**

|                                          |                                                     |
|------------------------------------------|-----------------------------------------------------|
| Class                                    | 9                                                   |
| Classification code                      | M6                                                  |
| Packing group                            | III                                                 |
| Hazard identification no.                | 90                                                  |
| UN number                                | UN3082                                              |
| Proper shipping name                     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Technical name                           | dibenzylbenzene, ar-methyl derivative               |
| Tunnel restriction code                  | -                                                   |
| Label                                    | 9                                                   |
| Environmentally hazardous substance mark | Symbol "fish and tree"                              |

**14.2 Transport IMDG**

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Class                 | 9                                                   |
| Packing group         | III                                                 |
| UN number             | UN3082                                              |
| Proper shipping name  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Technical name        | dibenzylbenzene, ar-methyl derivative               |
| EmS                   | F-A, S-F                                            |
| Label                 | 9                                                   |
| Marine pollutant mark | Symbol "fish and tree"                              |

**14.3 Transport ICAO-TI / IATA**

|                                          |                                                     |
|------------------------------------------|-----------------------------------------------------|
| Class                                    | 9                                                   |
| Packing group                            | III                                                 |
| UN number                                | UN3082                                              |
| Proper shipping name                     | Environmentally hazardous substance, liquid, n.o.s. |
| Technical name                           | dibenzylbenzene, ar-methyl derivative               |
| Label                                    | 9                                                   |
| Environmentally hazardous substance mark | Symbol "fish and tree"                              |

**14.4 Other information**

No data available.

**14.5 Environmental hazards**



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Information on environmental hazards, if relevant, please see 14.1 - 14.3.

**14.6 Special precautions for user**

No data available.

**14.7 Maritime transport in bulk according to IMO instruments**

Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

**Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No 3

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is subject to Part I of Annex I, risk category:

E2

**Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)**

Comments

not applicable

**Other regulations**

Observe employment restrictions for child bearing mothers and nursing mothers.

Observe employment restrictions for women of child-bearing age.

Observe employment restrictions for young people.

**National regulations****National chemical inventories**

|                      |                  |
|----------------------|------------------|
| USA (TSCA)           | listed           |
| DSL/NDSL (Canada)    | DSL listed       |
| ENCS (Japan)         | ENCS/ISHL listed |
| ECL (Korea)          | listed           |
| AICS (Australia)     | listed           |
| IECSC / NEPA (China) | listed           |
| CSNN (Taiwan)        | TCSI listed      |

**15.2 Chemical safety assessment**

A chemical safety assessment has been carried out for this substance.

**SECTION 16: Other information****Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

**List of existing exposure scenarios**

ES001 Exposure scenario/s of the manufacturer

**Creation of the safety data sheet**

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

**Alterations/supplements:**

Alterations to the previous edition are marked in the left-hand margin.

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**Trade name:** Marlotherm LH

**Product no.:** 5009232

**Current version :** 2.1.0, issued: 21.10.2021

**Replaced version:** 2.0.1, issued: 21.06.2021

**Region:** GB

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