# Safety Data Sheet

according to Regulation (EC) No 1907/2006



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

### 1.1. Product identifier

FAM: MB-PM025

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

**Use of the substance/mixture**

Industrial use resulting in manufacture of another substance (use of intermediates)

**Uses advised against**

Any non-intended use.

### 1.3. Details of the supplier of the safety data sheet

Company name: Thierry GmbH
Street: Motorstrasse 30
Place: D-70499 Stuttgart
Telephone: +49 (0)711 8399 7470 Telefax: +49 (0)711 8399 7480
e-mail: info@thierry-gmbh.de
Contact person: Veronika Krieger Telephone: 0711/839974-0
Internet: www.thierry-gmbh.de
Responsible Department: Dr. Gans-Eichler e-mail: info@tge-consult.de
Chemieberatung GmbH Tel.: +49(0)251/394868-69
Raesfeldstr. 22 www.tge-consult.de
D-48149 Münster

### 1.4. Emergency telephone number:

Emergency medical information: Poison Information Center Mainz - Tel: +49 (6131) 19240

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No. 1272/2008**

Hazard categories:
Flammable liquid: Flam. Liq. 2
Aspiration hazard: Asp. Tox. 1
Skin corrosion/irritation: Skin Irrit. 2
Reproductive toxicity: Repr. 2
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazardous to the aquatic environment: Aquatic Acute 1
Hazardous to the aquatic environment: Aquatic Chronic 1
Hazard Statements:
Highly flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Suspected of damaging the unborn child.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

### 2.2. Label elements

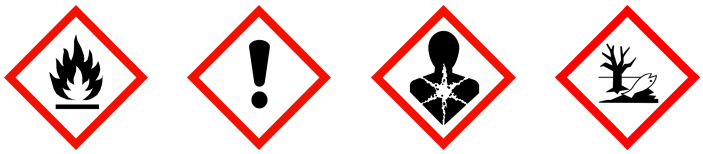
**Regulation (EC) No. 1272/2008**

**Hazard components for labelling**

toluene
octane; 2,2,4-trimethylpentane
2,4,4-trimethylpent-2-ene

**Signal word:** Danger

**Pictograms:**



**Hazard statements**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H410 | Very toxic to aquatic life with long lasting effects. |

**Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| 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. |
| P331 | Do NOT induce vomiting. |
| P391 | Collect spillage. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |

**2.3. Other hazards**

In use, may form flammable/explosive vapour-air mixture.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## SECTION 3: Composition/information on ingredients

**3.2. Mixtures**

**Hazardous components**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 108-88-3 | toluene | | | 50 - < 55 % |
| | 203-625-9 | 601-021-00-3 | | |
| | Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304 | | | |
| 540-84-1 | octane; 2,2,4-trimethylpentane | | | 30 - < 35 % |
| | 208-759-1 | 601-009-00-8 | | |
| | Flam. Liq. 2, Asp. Tox. 1, Skin Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H225 H304 H315 H336 H400 H410 | | | |
| 107-39-1 | 2,4,4-trimethylpent-1-ene | | | 15 - < 20 % |
| | 203-486-4 | 601-031-00-8 | | |
| | Flam. Liq. 2, Aquatic Chronic 2; H225 H411 | | | |
| 107-40-4 | 2,4,4-trimethylpent-2-ene | | | 5 - < 10 % |
| | 203-488-5 | | | |
| | Flam. Liq. 2, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Asp. Tox. 1; H225 H315 H319 H335 H304 | | | |
| 64-17-5 | ethanol, ethyl alcohol | | | 5 - < 10 % |

| | | | | |
|---|---|---|---|---|
| | 200-578-6 | 603-002-00-5 | 01-2119457610-43 | |
| | Flam. Liq. 2, Eye Irrit. 2; H225 H319 | | | |

Full text of H and EUH statements: see section 16.

**Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH).

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Take off immediately all contaminated clothing.

**After inhalation**

In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. If experiencing respiratory symptoms: Call a doctor.

**After contact with skin**

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

**After contact with eyes**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

**After ingestion**

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media**

alcohol resistant foam. dry extinguishing powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**

High power water jet.

### 5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO2).

### 5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Remove persons to safety. Provide adequate ventilation. Remove all sources of ignition.

Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment (refer to section 8).

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

**Advice on safe handling**

Provide adequate ventilation.
Wear suitable protective clothing. ( See section 8.)
Avoid contact with skin, eyes and clothes.
Do not breathe vapour/aerosol.

**Advice on protection against fire and explosion**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.
Heating causes rise in pressure with risk of bursting.

**Further information on handling**

Flammable vapours can accumulate in head space of closed systems.
General protection and hygiene measures: refer to chapter 8

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Keep container dry.
Make sure spills can be contained (e.g. sump pallets or kerbed areas).
Ensure adequate ventilation of the storage area.

**Advice on storage compatibility**

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

**Further information on storage conditions**

Protect against: Light. UV-radiation/sunlight. heat. Cold moisture.

**7.3. Specific end use(s)**

See section 1.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Exposure limits (EH40)**

| CAS No | Substance | ppm | mg/m³ | fibres/ml | Category | Origin |
|---|---|---|---|---|---|---|
| 64-17-5 | Ethanol | 1000 | 1920 | | TWA (8 h) | WEL |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | - | - | | STEL (15 min) | WEL |
| 108-88-3 | Toluene | 50 | 191 | | TWA (8 h) | WEL |
| | | 100 | 384 | | STEL (15 min) | WEL |

**DNEL/DMEL values**

| CAS No | Substance | | | |
|---|---|---|---|---|
| DNEL type | | Exposure route | Effect | Value |
| 108-88-3 | toluene | | | |
| Worker DNEL, acute | | inhalation | local | 384 mg/m³ |
| Consumer DNEL, acute | | inhalation | systemic | 226 mg/m³ |
| Worker DNEL, long-term | | inhalation | local | 192 mg/m³ |
| Worker DNEL, long-term | | inhalation | systemic | 192 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 384 mg/kg bw/day |
| Consumer DNEL, acute | | inhalation | local | 226 mg/m³ |
| Consumer DNEL, long-term | | inhalation | systemic | 56,5 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 226 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 8,13 mg/kg bw/day |
| 64-17-5 | ethanol, ethyl alcohol | | | |
| Worker DNEL, acute | | inhalation | local | 1900 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 343 mg/kg bw/day |
| Worker DNEL, long-term | | inhalation | systemic | 950 mg/m³ |
| Consumer DNEL, acute | | inhalation | local | 950 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 206 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 114 mg/m³ |
| Consumer DNEL, long-term | | oral | systemic | 87 mg/kg bw/day |

**PNEC values**

| CAS No | Substance | |
|---|---|---|
| Environmental compartment | | Value |
| 108-88-3 | toluene | |
| Freshwater | | 0,68 mg/l |
| Freshwater sediment | | 16,39 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 13,61 mg/l |
| Soil | | 2,89 mg/kg |
| 64-17-5 | ethanol, ethyl alcohol | |
| Freshwater | | 0,96 mg/l |
| Freshwater (intermittent releases) | | 2,75 mg/l |
| Marine water | | 0,79 mg/l |
| Marine water (intermittent releases) | | 2,75 mg/l |
| Freshwater sediment | | 3,6 mg/kg |
| Secondary poisoning | | 720 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 580 mg/l |
| Soil | | 0,63 mg/kg |

**8.2. Exposure controls**




**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaustion at critical locations.

**Protective and hygiene measures**

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Remove contaminated clothing immediatley and dispose off safely.

**Eye/face protection**

Eye glasses with side protection

**Hand protection**

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.
Suitable material:
(penetration time (maximum wearing period): >= 8 Stunden):
FKM (fluororubber).
Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Skin protection**

Wear fire/flame resistant/retardant clothing.
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
Generation/formation of aerosols
exceeding exposure limit values
Insufficient ventilation.
Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type A
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state: | liquid |
| Colour: | colourless |
| Odour: | characteristic |
| pH-Value: | not determined |

**Changes in the physical state**

| | |
|---|---|
| Melting point: | not determined |
| Initial boiling point and boiling range: | not determined |
| Pour point: | not determined |
| Flash point: | <6 °C |

**Explosive properties**

In use, may form flammable/explosive vapour-air mixture.

| | |
|---|---|
| Lower explosion limits: | not determined |
| Upper explosion limits: | not determined |
| Ignition temperature: | not determined |
| Decomposition temperature: | not determined |

**Oxidizing properties**

none

| | |
|---|---|
| Vapour pressure: (at 20 °C) | not determined |
| Density: | not determined |
| Water solubility: | not determined |

**Solubility in other solvents**

not determined

| | |
|---|---|
| Partition coefficient: | not determined |
| Viscosity / dynamic: (at 20 °C) | not determined |
| Viscosity / kinematic: (at 20 °C) | not determined |
| Flow time: | not determined |
| Vapour density: | not determined |
| Evaporation rate: | not determined |
| Solvent separation test: | not determined |
| Solvent content: | not determined |

**9.2. Other information**

| | |
|---|---|
| Solid content: | not determined |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

Protect against: Light. UV-radiation/sunlight. heat. Cold. moisture.

**10.5. Incompatible materials**

Materials to avoid: Strong acid. strong alkalis. Oxidizing agents, strong. Peroxides. Reducing agents, strong.

**10.6. Hazardous decomposition products**

Can be released in case of fire: Carbon monoxide Carbon dioxide ($CO_2$).

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

**Toxicocinetics, metabolism and distribution**

No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met.

| CAS No | Chemical name | | | | |
|---|---|---|---|---|---|
| | Exposure route | Dose | Species | Source | Method |
| 108-88-3 | toluene | | | | |
| | oral | LD50 >5000 mg/kg | Rat | ECHA Dossier | |
| | dermal | LD50 >5000 mg/kg | Rabbit | ECHA Dossier | |
| | inhalation (4 h) vapour | LC50 28,1 mg/l | Rat | ECHA Dossier | |
| 540-84-1 | octane; 2,2,4-trimethylpentane | | | | |
| | oral | LD50 > 5000 mg/kg | Rat | REACH Dossier | OECD Guideline 401 |
| | dermal | LD50 > 2000 mg/kg | Rabbit | REACH Dossier | OECD Guideline 402 |
| | inhalation (4 h) vapour | LC50 > 33,52 mg/l | Rat | REACH Dossier | OECD Guideline 403 |
| | inhalation (4 h) aerosol | LC50 >33,52 mg/l | Rat | ECHA Dossier | |
| 64-17-5 | ethanol, ethyl alcohol | | | | |
| | oral | LD50 >5000 mg/kg | Rat. | ECHA Dossier | |
| | inhalation (4 h) vapour | LC50 124,7 mg/l | Rat. | ECHA Dossier | |

**Irritation and corrosivity**

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of damaging the unborn child. (toluene)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

toluene (CAS-No.: 108-88-3):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Exposure time: 95d

Species: Rat

Method: OECD Guideline 416

Result: NOAEC = 500 ppm

Developmental toxicity/teratogenicity:

Exposure time: 20d

Species: Rat.

Method: EPA OTS 798.4350 (Inhalation Developmental Toxicity Screen)

Result: NOAEC = 750 ppm (maternal toxicity)

Result: NOAEC = 750 ppm (developmental toxicity)

Literature information: ECHA Dossier

Ethanol. (CAS-No.: 64-17-5):

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.

Reproductive toxicity:

Exposure time: 18 weeks
Species: CD-1 Mouse.
Method: OECD Guideline 416
Result: NOAEL = 20700 mg/kg/day
Developmental toxicity/teratogenicity:
Exposure time: 19d
Species: Sprague-Dawley Rat.
Method: OECD Guideline 414
Result: NOAEL = 16000 ppm (maternal toxicity)
Result: NOAEL >= 20000 ppm (teratogenicity)
Literature information: ECHA Dossier

octane; 2,2,4-trimethylpentane (CAS-No.: 540-84-1):
In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist.
Literature information: ECHA Dossier

**STOT-single exposure**

May cause drowsiness or dizziness. (toluene; octane; 2,2,4-trimethylpentane)

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. (toluene)
toluene (CAS-No.: 108-88-3):
Subchronic oral toxicity
Exposure time: 13 weeks
Species: Mouse.
Method: OECD Guideline 408
Result: NOAEL = 625 mg/kg bw/day
Literature information: ECHA Dossier

Ethanol. (CAS-No.: 64-17-5):
Subchronic oral toxicity
Exposure time: 90d
Species: Sprague-Dawley Rat.
Method: OECD Guideline 408
Result: NOAEL = 1280 mg/kg
Literature information: ECHA Dossier

**Aspiration hazard**

May be fatal if swallowed and enters airways. (toluene; octane; 2,2,4-trimethylpentane; 2,4,4-trimethylpent-2-ene)

**Specific effects in experiment on an animal**

No information available.

## SECTION 12: Ecological information

**12.1. Toxicity**

| CAS No | Chemical name | | | | | |
|---|---|---|---|---|---|---|
| | Aquatic toxicity | Dose | [h] \| [d] | Species | Source | Method |
| 108-88-3 | toluene | | | | | |
| | Acute fish toxicity | LC50 (5,5) mg/l | 96 h | Oncorhynchus kisutch | ECHA Dossier | |
| | Acute crustacea toxicity | EC50 (3,78) mg/l | 48 h | Ceriodaphnia dubia | ECHA Dossier | |
| | Acute bacteria toxicity | (134 mg/l) | 3 h | Chlorella vulgaris and Chlamydomonas angulosa | ECHA Dossier | |
| 540-84-1 | octane; 2,2,4-trimethylpentane | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Acute fish toxicity | LC50 | 0,11 mg/l | 96 h | Oncorhynchus mykiss | SIDS Initial Assessment Report For SIAM | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 mg/l | 2,943 | 72 h | Pseudokirchneriella subcapitata | REACH Dossier | QSAR |
| | Acute crustacea toxicity | EC50 | 0,4 mg/l | 48 h | Daphnia magna | REACH Dossier | READ ACROSS |
| | Fish toxicity | NOEC mg/l | 0,82 | 28 d | Oncorhynchus mykiss | REACH Dossier | The aquatic toxicity was estimated by a |
| | Crustacea toxicity | NOEC | 1 mg/l | 21 d | Daphnia magna | SIDS Initial Assessment Report For SIAM | OECD Guideline 211 |
| 64-17-5 | ethanol, ethyl alcohol | | | | | | |
| | Acute fish toxicity | LC50 mg/l | 14200 | 96 h | Pimephales promelas | ECHA Dossier | |
| | Acute algae toxicity | ErC50 | 275 mg/l | 72 h | Chlorella vulgaris | ECHA Dossier | |
| | Acute crustacea toxicity | EC50 mg/l | 5012 | 48 h | Ceriodaphnia dubia | ECHA Dossier | |
| | Crustacea toxicity | NOEC | 9,6 mg/l | 9 d | Daphnia magna | ECHA Dossier | |

**12.2. Persistence and degradability**

| CAS No | Chemical name | | | |
|---|---|---|---|---|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 64-17-5 | ethanol, ethyl alcohol | | | |
| | other guideline | 84% | 20 | ECHA Dossier |
| | Product is biodegradable. | | | |

**12.3. Bioaccumulative potential**

**Partition coefficient n-octanol/water**

| CAS No | Chemical name | Log Pow |
|---|---|---|
| 108-88-3 | toluene | 2,73 |
| 540-84-1 | octane; 2,2,4-trimethylpentane | 4,08 |
| 64-17-5 | ethanol, ethyl alcohol | -0,31 |

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow uncontrolled discharge of product into the environment.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Advice on disposal**

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
Control report for waste code/ waste marking according to EAKV:

**Waste disposal number of waste from residues/unused products**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**Waste disposal number of used product**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

| | |
|---|---|
| **14.1. UN number:** | UN 1993 |
| **14.2. UN proper shipping name:** | FLAMMABLE LIQUID, N.O.S. (toluene; octane; 2,2,4-trimethylpentane) |
| **14.3. Transport hazard class(es):** | 3 |
| **14.4. Packing group:** | II |
| Hazard label: | 3 |


| | |
|---|---|
| Classification code: | F1 |
| Special Provisions: | 274 601 640C |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |
| Transport category: | 2 |
| Hazard No: | 33 |
| Tunnel restriction code: | D/E |

**Inland waterways transport (ADN)**

| | |
|---|---|
| **14.1. UN number:** | UN 1993 |
| **14.2. UN proper shipping name:** | FLAMMABLE LIQUID, N.O.S. (toluene; octane; 2,2,4-trimethylpentane) |
| **14.3. Transport hazard class(es):** | 3 |
| **14.4. Packing group:** | II |
| Hazard label: | 3 |


| | |
|---|---|
| Classification code: | F1 |
| Special Provisions: | 274 601 640C |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number:** | UN 1993 |
| **14.2. UN proper shipping name:** | FLAMMABLE LIQUID, N.O.S. (toluene; octane; 2,2,4-trimethylpentane) |
| **14.3. Transport hazard class(es):** | 3 |

**14.4. Packing group:** II

Hazard label: 3


Marine pollutant: YES
Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-E

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 1993

**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (toluene; octane; 2,2,4-trimethylpentane)

**14.3. Transport hazard class(es):** 3

**14.4. Packing group:** II

Hazard label: 3


Special Provisions: A3
Limited quantity Passenger: 1 L
Passenger LQ: Y341
Excepted quantity: E2
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

Danger releasing substance: octane; 2,2,4-trimethylpentane

**14.6. Special precautions for user**

See section 8.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not relevant.

## SECTION 15: Regulatory information

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 48: toluene

2010/75/EU (VOC): not determined

2004/42/EC (VOC): not determined

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

Additional information: P5c

**Additional information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No (mixture): 3, 48.

**National regulatory information**

| | |
|---|---|
| Employment restrictions: | Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. |
| Water contaminating class (D): | 2 - clearly water contaminating |

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

**Changes**

Rev. 1.00; 25.11.2015, Initial release
Rev. 2.00; 27.07.2018, Changes in chapter: 1-16.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

| Classification | Classification procedure |
|---|---|
| Flam. Liq. 2; H225 | On basis of test data |
| Asp. Tox. 1; H304 | Calculation method |
| Skin Irrit. 2; H315 | Calculation method |
| Repr. 2; H361d | Calculation method |
| STOT SE 3; H336 | Calculation method |
| STOT RE 2; H373 | Calculation method |
| Aquatic Acute 1; H400 | Calculation method |
| Aquatic Chronic 1; H410 | Calculation method |

**Relevant H and EUH statements (number and full text)**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Further Information**

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*