

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2015/830



Article No.: 348000  
Print date: 23.08.2021  
Version: 1.23

Effect Lacquer  
Revision date: 10.06.2021  
Issue date: 10.06.2021

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

1.1. **product identifiers**

Article No. (manufacturer/supplier) 348000  
Trade name/designation Effect Lacquer  
Fine Pearl Texture

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

**Relevant identified uses:**

Coating (Paint, Varnish).

**Uses advised against:**

Do not use for products which come into contact with the food stuffs.

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

**Manufacturer/supplier**

Heinrich König GmbH & Co.KG  
An der Rosenhelle 5  
D-61138 Niederdorfelden

Telephone: +49 6101 5360 0  
Telefax: +49 6101 5360 11  
E-mail: Info@heinrich-koenig.de  
Website: www.heinrich-koenig.de

**Department responsible for information:**

Laboratory

Only available during office hours:

Telephone: +49 6101 5360 71  
Mon - Thurs 08:00 to 16:00  
Friday 08:00 - 12:30

E-mail (competent person)

SDB@heinrich-koenig.de

1.4. **Emergency telephone number**

Emergency telephone number

Emergency CONTACT (24-Hour-Number): GBK  
GmbH +49 (0)6132-84463

Ireland (Éireann)

Emergency medical information: 8am-10pm (seven days)  
contact National Poisons Information Centre, Beaumont  
Hospital, Dublin 9 DOV2NO, Ireland.  
Telephone Number: "+353 (0)1 809 2166 "

**SECTION 2: Hazards identification**

2.1. **Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Aerosol 1 / H222

Aerosol

Extremely flammable aerosol.

Aerosol 1 / H229

Aerosol

Pressurised container: May burst if heated.

Eye Irrit. 2 / H319

Serious eye damage/eye irritation

Causes serious eye irritation.

STOT SE 3 / H336

STOT-single exposure

May cause drowsiness or dizziness.

Aquatic Chronic 3 / H412

Hazardous to the aquatic environment

Harmful to aquatic life with long lasting effects.

2.2. **Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms**



**Danger**

**Hazard statements**

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

H319

Causes serious eye irritation.

H336

May cause drowsiness or dizziness.

H412

Harmful 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.

P211

Do not spray on an open flame or other ignition source.

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P251 Do not pierce or burn, even after use.  
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

**Hazard components for labelling**

n-butyl acetate

**Supplemental hazard information**

EUH066 Repeated exposure may cause skin dryness or cracking.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition / information on ingredients**

**3.2. Mixtures**

**Description** Aerosol

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
204-065-8 115-10-6 603-019-00-8	01-2119472128-37-xxxx dimethyl ether Flam. Gas 1 H220 / liquefied gas H280	25 < 50
204-658-1 123-86-4 607-025-00-1	01-2119485493-29-xxxx n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336	10 < 20
201-159-0 78-93-3 606-002-00-3	01-2119457290-43-xxxx butanone Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	10 < 20
918-668-5 128601-23-0	01-2119455851-35-xxxx Hydrocarbons, C9, aromatics STOT SE 3 H335 / STOT SE 3 H336 / Asp. Tox. 1 H304 / Aquatic Chronic 2 H411 / Flam. Liq. 3 H226	5 < 7
205-500-4 141-78-6 607-022-00-5	01-2119475103-46-xxxx Ethyl acetate Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	5 < 7
203-550-1 108-10-1 606-004-00-4	01-2119473980-30-xxxx 4-methylpentan-2-one Flam. Liq. 2 H225 / Acute Tox. 4 H332 / Eye Irrit. 2 H319 / STOT SE 3 H335	2,5 < 3

**Additional information**

Full text of classification: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

**In case of inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

**Following skin contact**

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

**After eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

**Following ingestion**

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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- 4.2. **Most important symptoms and effects, both acute and delayed**  
In all cases of doubt, or when symptoms persist, seek medical advice.
- 4.3. **Indication of any immediate medical attention and special treatment needed**  
First Aid, decontamination, treatment of symptoms.

#### SECTION 5: Firefighting measures

- 5.1. **Extinguishing media**  
**Suitable extinguishing media**  
alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)  
**Unsuitable extinguishing media**  
strong water jet
- 5.2. **Special hazards arising from the substance or mixture**  
Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.
- 5.3. **Advice for firefighters**  
Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

#### SECTION 6: Accidental release measures

- 6.1. **Personal precautions, protective equipment and emergency procedures**  
Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.
- 6.2. **Environmental precautions**  
Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.
- 6.3. **Methods and material for containment and cleaning up**  
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.
- 6.4. **Reference to other sections**  
Observe protective provisions (see section 7 and 8).

#### SECTION 7: Handling and storage

- 7.1. **Precautions for safe handling**  
**Advices on safe handling**  
Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.  
**Further information**  
Vapours are heavier than air. Vapours form explosive mixtures with air.
- 7.2. **Conditions for safe storage, including any incompatibilities**  
**Requirements for storage rooms and vessels**  
Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".  
**Hints on joint storage**  
Keep away from strongly acidic and alkaline materials as well as oxidizers.  
**Further information on storage conditions**  
Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access

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only for authorised persons. Store carefully closed containers upright to prevent any leaks.

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

Observe technical data sheet. Observe instructions for use.

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

8.1. **Control parameters**

**Occupational exposure limit values:**

dimethyl ether

Index No. 603-019-00-8 / EC No. 204-065-8 / CAS No. 115-10-6

TWA: 766 mg/m<sup>3</sup>; 400 ppm

STEL: 958 mg/m<sup>3</sup>; 500 ppm

n-butyl acetate

Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

TWA: 724 mg/m<sup>3</sup>; 150 ppm

STEL: 966 mg/m<sup>3</sup>; 200 ppm

butanone

Index No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3

TWA: 600 mg/m<sup>3</sup>; 200 ppm

STEL: 899 mg/m<sup>3</sup>; 300 ppm

Ethyl acetate

Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

TWA: 730 mg/m<sup>3</sup>; 200 ppm

STEL: 1460 mg/m<sup>3</sup>; 400 ppm

4-methylpentan-2-one

Index No. 606-004-00-4 / EC No. 203-550-1 / CAS No. 108-10-1

TWA: 208 mg/m<sup>3</sup>; 50 ppm

STEL: 416 mg/m<sup>3</sup>; 100 ppm

**Additional information**

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

**DNEL:**

dimethyl ether

Index No. 603-019-00-8 / EC No. 204-065-8 / CAS No. 115-10-6

DNEL long-term inhalative (systemic), Workers: 1894 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 471 mg/m<sup>3</sup>

Ethyl acetate

Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

DNEL long-term dermal (systemic), Workers: 63 mg/kg

DNEL acute inhalative (local), Workers: 1468 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 1468 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers: 734 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 734 mg/m<sup>3</sup>

DNEL long-term oral (repeated), Consumer: 4,5 mg/kg

DNEL long-term dermal (systemic), Consumer: 37 mg/kg

DNEL acute inhalative (local), Consumer: 734 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Consumer: 734 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Consumer: 367 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 367 mg/m<sup>3</sup>

4-methylpentan-2-one

Index No. 606-004-00-4 / EC No. 203-550-1 / CAS No. 108-10-1

DNEL long-term dermal (systemic), Workers: 11,8 mg/kg

DNEL acute inhalative (local), Workers: 208 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 208 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers: 83 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 83 mg/m<sup>3</sup>

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DNEL long-term oral (repeated), Consumer: 4,2 mg/kg  
DNEL long-term dermal (systemic), Consumer: 4,2 mg/kg  
DNEL acute inhalative (local), Consumer: 155,2 mg/m<sup>3</sup>  
DNEL acute inhalative (systemic), Consumer: 155,2 mg/m<sup>3</sup>  
DNEL long-term inhalative (local), Consumer: 14,7 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Consumer: 14,7 mg/m<sup>3</sup>

Hydrocarbons, C9, aromatics

EC No. 918-668-5 / CAS No. 128601-23-0

DNEL long-term dermal (systemic), Workers: 25 mg/kg  
DNEL long-term inhalative (systemic), Workers: 150 mg/m<sup>3</sup>  
DNEL long-term oral (repeated), Consumer: 11 mg/kg  
DNEL long-term dermal (systemic), Consumer: 11 mg/kg  
DNEL long-term inhalative (systemic), Consumer: 32 mg/m<sup>3</sup>

butanone

Index No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3

DNEL long-term dermal (systemic), Workers: 1161 mg/kg  
DNEL long-term inhalative (systemic), Workers: 600 mg/m<sup>3</sup>  
DNEL long-term oral (repeated), Consumer: 31 mg/kg  
DNEL acute dermal, short-term (local), Consumer: 412 mg/kg  
DNEL long-term dermal (systemic), Consumer: 206 mg/kg  
DNEL long-term inhalative (systemic), Consumer: 106 mg/m<sup>3</sup>

n-butyl acetate

Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

DNEL acute dermal, short-term (systemic), Workers: 11 mg/kg  
DNEL long-term dermal (systemic), Workers: 7 mg/kg  
DNEL acute inhalative (local), Workers: 600 mg/m<sup>3</sup>  
DNEL acute inhalative (systemic), Workers: 600 mg/m<sup>3</sup>  
DNEL long-term inhalative (local), Workers: 300 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Workers: 48 mg/m<sup>3</sup>  
DNEL short-term oral (acute), Consumer: 2 mg/kg  
DNEL long-term oral (repeated), Consumer: 2 mg/kg  
DNEL acute dermal, short-term (systemic), Consumer: 6 mg/kg  
DNEL long-term dermal (systemic), Consumer: 3,4 mg/kg  
DNEL acute inhalative (local), Consumer: 300 mg/m<sup>3</sup>  
DNEL acute inhalative (systemic), Consumer: 300 mg/m<sup>3</sup>  
DNEL long-term inhalative (local), Consumer: 35,7 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Consumer: 12 mg/m<sup>3</sup>

**PNEC:**

dimethyl ether

Index No. 603-019-00-8 / EC No. 204-065-8 / CAS No. 115-10-6

PNEC aquatic, freshwater: 0,155 mg/L  
PNEC sediment, freshwater: 0,681 mg/kg  
PNEC, soil: 0,045 mg/kg  
PNEC sewage treatment plant (STP): 160 mg/L

Ethyl acetate

Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

PNEC aquatic, freshwater: 0,24 mg/L  
PNEC aquatic, marine water: 0,024 mg/L  
PNEC aquatic, intermittent release: 1,65 mg/L  
PNEC sediment, freshwater: 1,15 mg/kg  
PNEC sediment, marine water: 0,034 mg/kg  
PNEC, soil: 0,148 mg/kg  
PNEC sewage treatment plant (STP): 650 mg/L  
PNEC Secondary Poisoning: 200 mg/kg

4-methylpentan-2-one

Index No. 606-004-00-4 / EC No. 203-550-1 / CAS No. 108-10-1

PNEC aquatic, freshwater: 0,6 mg/L  
PNEC aquatic, marine water: 0,06 mg/L  
PNEC aquatic, intermittent release: 1,5 mg/L  
PNEC sediment, freshwater: 8,27 mg/kg

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PNEC sediment, marine water: 0,83 mg/kg  
PNEC, soil: 1,3 mg/kg  
PNEC sewage treatment plant (STP): 27,5 mg/L

butanone

Index No. 606-002-00-3 / EC No. 201-159-0 / CAS No. 78-93-3

PNEC aquatic, freshwater: 55,8 mg/L  
PNEC aquatic, marine water: 55,8 mg/L  
PNEC aquatic, intermittent release: 55,8 mg/L  
PNEC sediment, freshwater: 284,7 mg/kg  
PNEC sediment, marine water: 284,7 mg/kg  
PNEC, soil: 22,5 mg/kg  
PNEC sewage treatment plant (STP): 709 mg/L

n-butyl acetate

Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

PNEC aquatic, freshwater: 0,18 mg/L  
PNEC aquatic, marine water: 0,018 mg/L  
PNEC aquatic, intermittent release: 0,36 mg/L  
PNEC sediment, freshwater: 0,981 mg/kg  
PNEC sediment, marine water: 0,0981 mg/kg  
PNEC, soil: 0,0903 mg/kg

## 8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

### Personal protection equipment

#### **Respiratory protection**

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Use only respiratory protection equipment with CE-symbol including four digit test number.

#### **Hand protection**

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

#### **Eye/face protection**

Wear closely fitting protective glasses in case of splashes.

#### **Body protection**

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

#### **Protective measures**

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

### Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

## **SECTION 9: Physical and chemical properties**

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

#### **Appearance:**

**Physical state:**

**Colour:**

**Liquid**

**refer to label**

**Odour:**

**Odour threshold:**

**pH at 20 °C:**

**Melting point/freezing point:**

**Initial boiling point and boiling range:**

**Preparations containing solvent**

**not determined**

**N.A.**

**n.a.**

**-24 °C**

Method: calculated.

Source: dimethyl ether

**Flash point:**

**-41 °C**

\*

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Method: calculated.

**Evaporation rate:** **0,4 mg/s**  
Source: Ethyl acetate

**flammability**

**Burning time:** **not determined**

**Upper/lower flammability or explosive limits:**

**Lower explosion limit:** **2,24 Vol-%**  
Method: calculated.

**Upper explosion limit:** **26,2 Vol-%**  
Method: calculated.  
Source: dimethyl ether

**Vapour pressure at 20 °C:** **3678,0408 mbar**  
Method: calculated.

**Vapour density:** **not determined**

**Relative density:**

**Density at 20 °C:** **0,78 g/cm<sup>3</sup>**  
Method: calculated.

**Solubility(ies):**

**Water solubility at 20 °C:** **insoluble**

**Partition coefficient: n-octanol/water:** **see section 12**

**Auto-ignition temperature:** **not determined**

**Decomposition temperature:** **not determined**

**Viscosity at 20 °C:** **25 s 3 mm**  
Method: EN ISO 2431

**Explosive properties:** **not determined**

**Oxidising properties:** **not determined**

9.2. **Other information** \*

**Solid content:** **14,15 weight-%**

**solvent content:**

**Organic solvents:** **86 weight-%**

**Water:** **0 weight-%**

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No information available.

10.2. **Chemical stability**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. **Conditions to avoid**

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

not applicable

10.6. **Hazardous decomposition products**

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

**SECTION 11: Toxicological information**

Classification according to Regulation (EC) No 1272/2008 [CLP]

11.1. **Information on toxicological effects** \*

**Acute toxicity**

dimethyl ether

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inhalative (Gases), LC50, Rat: > 20000 ppmV (4 h)

**Ethyl acetate**

oral, LD50, Rat: 4934 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: > 20000 mg/kg  
inhalative (vapours), LC50, Rat: 29,3 mg/L (4 h)  
Based on available data, the classification criteria are not met.

**4-methylpentan-2-one**

oral, LD50, Rat: > 2193 mg/kg  
Method: OECD 401  
dermal, LD50, Rat: > 2000 mg/kg  
Method: OECD 402  
inhalative (vapours), LC50, Rat: 8,3 - 16,6 mg/L (4 h)  
Method: OECD 403  
Harmful by inhalation.

**Hydrocarbons, C9, aromatics**

oral, LD50, Rat: 3592 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: > 3160 mg/kg  
Method: OECD 402  
Based on available data, the classification criteria are not met.

**butanone**

oral, LD50, Rat: > 2193 mg/kg  
Method: OECD 423  
dermal, LD50, Rabbit: > 5000 mg/kg  
Method: OECD 402  
inhalative (vapours), LC50, Rat: 34 mg/L (4 h)  
Based on available data, the classification criteria are not met.

**n-butyl acetate**

oral, LD50, Rat: 10760 mg/kg  
Method: OECD 423  
dermal, LD50, Rabbit: > 14112 mg/kg  
Method: OECD 402  
inhalative (vapours), LC50, Rat: 23,4 mg/L (4 h)  
Method: OECD 403  
Based on available data, the classification criteria are not met.

**Skin corrosion/irritation; Serious eye damage/eye irritation**

Causes serious eye irritation.

**Ethyl acetate**

eyes  
Causes serious eye irritation.

**4-methylpentan-2-one**

eyes  
Causes serious eye irritation.

**butanone**

eyes, Rabbit  
Method: OECD 405  
Causes serious eye irritation.

**Respiratory or skin sensitisation**

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

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

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

**STOT-single exposure; STOT-repeated exposure**

May cause drowsiness or dizziness.

**dimethyl ether**

Specific target organ toxicity (single exposure), drowsiness Evaluation May cause drowsiness or dizziness.



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literature value

Ethyl acetate

Specific target organ toxicity (single exposure), drowsiness  
May cause drowsiness or dizziness.

4-methylpentan-2-one

Specific target organ toxicity (single exposure), Irritation  
May cause respiratory irritation.

Hydrocarbons, C9, aromatics

Specific target organ toxicity (single exposure), Irritation  
May cause respiratory irritation.  
Specific target organ toxicity (single exposure), drowsiness  
May cause drowsiness or dizziness.

butanone

Specific target organ toxicity (single exposure), drowsiness  
May cause drowsiness or dizziness.

n-butyl acetate

Specific target organ toxicity (single exposure), drowsiness  
May cause drowsiness or dizziness.

#### Aspiration hazard

Hydrocarbons, C9, aromatics

Aspiration hazard  
May be fatal if swallowed and enters airways.

#### Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

#### Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

### SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]  
Do not allow to enter into surface water or drains.

#### 12.1. Toxicity

Ethyl acetate

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 230 mg/L (96 h)  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 610 mg/L (48 h)  
Algae toxicity, ErC50, Desmodesmus subspicatus: 5600 mg/L (48 h)  
Based on available data, the classification criteria are not met.

4-methylpentan-2-one

Fish toxicity, LC50, Danio rerio (zebrafish): > 179 mg/L (96 h)  
Method: OECD 203  
Daphnia toxicity, EC50, Daphnia magna: > 200 mg/L (48 h)  
Method: OECD 202  
Bacteria toxicity, EC50, Pseudomonas putida: 275 mg/L (16 h)  
Based on available data, the classification criteria are not met.

Hydrocarbons, C9, aromatics

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 9,2 mg/L (96 h)  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 3,2 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 2,6 - 2,9 mg/L (72 h)  
Based on available data, the classification criteria are not met.

butanone

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 2990 mg/L (96 h)  
Method: OECD 203

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Daphnia toxicity, EC50, Daphnia magna (Big water flea): 308 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 1972 mg/L (72 h)  
Method: OECD 201  
Bacteria toxicity, EC0, Pseudomonas putida: 1150 mg/L (16 h)  
Based on available data, the classification criteria are not met.

**n-butyl acetate**

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 18 mg/L (96 h)  
Method: OECD 203  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 44 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, EC50, Desmodesmus subspicatus.: 397 mg/L (72 h)  
Method: OECD 201  
Based on available data, the classification criteria are not met.

**Long-term Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Ethyl acetate**

Fish toxicity, NOEC, Pimephales promelas (fathead minnow): > 9,65 mg/L (32 d)  
Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 2,4 mg/L (21 D)  
Method: OECD 211  
Algae toxicity, NOEC, Desmodesmus subspicatus.: > 100 mg/L (72 h)  
Method: OECD 201.  
Based on available data, the classification criteria are not met.

**4-methylpentan-2-one**

Daphnia toxicity, NOEC, Daphnia magna (Big water flea) 30 - 35 mg/L (21 D)  
Method: OECD 211  
Based on available data, the classification criteria are not met.

**Hydrocarbons, C9, aromatics**

Fish toxicity, LC50 (96 h)  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**12.2. Persistence and degradability**

**Ethyl acetate**

Biodegradation: 79 %  
Method: OECD 301D  
Readily biodegradable (according to OECD criteria).

**4-methylpentan-2-one**

Biodegradation: 83 % (28 D)  
Method: OECD 301 F  
Readily biodegradable (according to OECD criteria).

**Hydrocarbons, C9, aromatics**

Biodegradation:  
Readily biodegradable (according to OECD criteria).

**butanone**

Biodegradation: 98 % (28 d)  
Readily biodegradable (according to OECD criteria).

**n-butyl acetate**

Biodegradation, aerobic: 83 % (28 D)  
Method: OECD 301D  
Readily biodegradable (according to OECD criteria).

**12.3. Bioaccumulative potential**

**dimethyl ether**

Partition coefficient: n-octanol/water: 0,7  
Method: Log KOW

**Ethyl acetate**

Partition coefficient: n-octanol/water: 0,68

**4-methylpentan-2-one**

Partition coefficient: n-octanol/water: 1,31 0 - 1,9

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Method: OECD 117

butanone

Partition coefficient: n-octanol/water: 0,3

n-butyl acetate

Partition coefficient: n-octanol/water: 2,3

Method: OECD 117

**12.4. Mobility in soil**

Toxicological data are not 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.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Appropriate disposal / Product Recommendation**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

**List of proposed waste codes/waste designations in accordance with EWC**

150110\* packaging containing residues of or contaminated by dangerous substances

\*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

**Appropriate disposal / Package Recommendation**

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

**SECTION 14: Transport information**

**14.1. UN number**

UN 1950

**14.2. UN proper shipping name**

Land transport (ADR/RID):

Aerosols, flammable

Sea transport (IMDG):

AEROSOLS

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

Aerosols, flammable

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

2.1

**14.4. Packing group**

No further relevant information available.

**14.5. Environmental hazards**

Land transport (ADR/RID)

No further relevant information available.

Marine pollutant

No further relevant information available.

**14.6. Special precautions for user**

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

**Further information**

**Land transport (ADR/RID)**

tunnel restriction code

D

**Sea transport (IMDG)**

EmS-No.

F-D, S-U

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

not applicable

**SECTION 15: Regulatory information**

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

**EU legislation**

**Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]**

Maximum VOC content (g/L) of the product in a ready to use condition: 674

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.  
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

**Substance/product listed in the following inventories:**

DSL no information

TSCA no information

**15.2. Chemical Safety Assessment**

**For the following substances of this mixture a chemical safety assessment has been carried out:**

EC No. CAS No.	Designation	REACH No.
204-065-8 115-10-6	dimethyl ether	01-2119472128-37-xxxx
204-658-1 123-86-4	n-butyl acetate	01-2119485493-29-xxxx
201-159-0 78-93-3	butanone	01-2119457290-43-xxxx
918-668-5 128601-23-0	Hydrocarbons, C9, aromatics	01-2119455851-35-xxxx
205-500-4 141-78-6	Ethyl acetate	01-2119475103-46-xxxx
203-550-1 108-10-1	4-methylpentan-2-one	01-2119473980-30-xxxx

**SECTION 16: Other information**

**Full text of classification in section 3**

Flam. Gas 1 / H220	flammable gases	Extremely flammable gas.
liquefied gas / H280	Gases under pressure	Contains gas under pressure; may explode if heated.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.

**Classification procedure**

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

Aerosol 1	Aerosol	On basis of test data.
Aerosol 1	Aerosol	On basis of test data.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
Aquatic Chronic 3	Hazardous to the aquatic environment	Calculation method.

**Abbreviations and acronyms**

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive

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EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

**Further information**

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

\* Data changed compared with the previous version