

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 6 00031 00000 epple Dilution 457  
Print date 13.04.2023 Revision date 13.04.2023  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Article No. (manufacturer/supplier): 6 00031 00000  
Trade name/designation epple Dilution 457  
UFI: MK80-S0SS-X00W-Y5D4

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

**Relevant identified uses:**

Product for cleaning or diluting sealants or adhesives.

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

**supplier (manufacturer/importer/downstream user/distributor)**

E. Epple & Co. GmbH

Hertzstr. 8

71083 Herrenberg

Telephone: +49 7032 / 9771-17

Telefax: +49 7032 / 9771-60

www.epple-chemie.de

**Department responsible for information:**

laboratory

E-mail (competent person)

labor@epple-chemie.de

**1.4. Emergency telephone number**

Information center against poisoning Bonn

+49 (0) 228 / 19 240 (Advice in German)

**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].

Flam. Liq. 2 / H225

Flammable liquids

Highly flammable liquid and vapour.

Skin Irrit. 2 / H315

Skin corrosion/irritation

Causes skin irritation.

Eye Irrit. 2 / H319

Serious eye damage/eye irritation

Causes serious eye irritation.

Repr. 2 / H361

Reproductive toxicity

Suspected of damaging the unborn child.

STOT SE 3 / H336

STOT-single exposure

May cause drowsiness or dizziness.

STOT RE 2 / H373

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2 / H411

Hazardous to the aquatic environment

Toxic to aquatic life with long lasting effects.

**2.2. Label elements**

The product is classified and labelled according to EC directives or corresponding national laws.

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

**Hazard pictograms**



**Danger**

**Hazard statements**

H225

Highly flammable liquid and vapour.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H361

Suspected of damaging the unborn child.

H336

May cause drowsiness or dizziness.

H373

May cause damage to organs through prolonged or repeated exposure.

H411

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 vapour.

P280

Wear protective gloves.

P304 + P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P332 + P313

If skin irritation occurs: Get medical advice/attention.

P501

Dispose of contents / container to a certified waste management company.

**Hazard components for labelling**

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Toluene  
Ethyl 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** Solvents/Thinner

**Hazardous ingredients**

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
205-500-4 141-78-6	01-2119475103-46 Ethyl acetate	49,9 - 74,9
607-022-00-5	Eye Irrit. 2 H319 / STOT SE 3 H336 / Flam. Liq. 2 H225 / EUH066	
203-625-9 108-88-3	01-2119471310-51 Toluene	9,9 - 19,9
601-021-00-3	Flam. Liq. 2 H225 / Repr. 2 H361 / Asp. Tox. 1 H304 / STOT RE 2 H373 / Skin Irrit. 2 H315 / STOT SE 3 H336	
926-605-8	01-2119486291-36 Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane Flam. Liq. 2 H225 / Asp. Tox. 1 H304 / STOT SE 3 H336 / Aquatic Chronic 2 H411	9,9 - 19,9
921-024-6	01-2119475514-35 Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane Flam. Liq. 2 H225 / Skin Irrit. 2 H315 / Asp. Tox. 1 H304 / STOT SE 3 H336 / Aquatic Chronic 2 H411	2,4 - 9,9
927-510-4	01-2119475515-33 Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics Skin Irrit. 2 H315 / STOT SE 3 H336 / Asp. Tox. 1 H304 / Aquatic Chronic 2 H411 / Flam. Liq. 2 H225	2,4 - 9,9
931-254-9	01-2119484651-34 Hydrocarbons, C6, isoalkanes, <5% n-hexane Flam. Liq. 2 H225 / Skin Irrit. 2 H315 / Asp. Tox. 1 H304 / STOT SE 3 H336 / Aquatic Chronic 2 H411	2,4 - 9,9
203-777-6 110-54-3	01-2119480412-44 n-Hexane	0,9 - 2,4
601-037-00-0	Flam. Liq. 2 H225 / Repr. 2 H361 / Asp. Tox. 1 H304 / STOT RE 2 H373 / Skin Irrit. 2 H315 / STOT SE 3 H336 / Aquatic Chronic 2 H411 Specific concentration limit (SCL): STOT RE 2 H373 >= 5	
203-806-2 110-82-7	01-2119463273-41 cyclohexane	0,1 - 0,9
601-017-00-1	Flam. Liq. 2 H225 / Asp. Tox. 1 H304 / Skin Irrit. 2 H315 / STOT SE 3 H336 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	

**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

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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.

**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. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

**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**

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**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. Floors must be electrically conductive.

**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 5 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access 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**

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

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3

TWA: 191 mg/m<sup>3</sup>; 50 ppm

STEL: 384 mg/m<sup>3</sup>; 100 ppm

Hydrocarbons, C6, isoalkanes, <5% n-hexane

EC No. 931-254-9

TWA: 1800 mg/m<sup>3</sup>; 500 ppm

n-Hexane

Index No. 601-037-00-0 / EC No. 203-777-6 / CAS No. 110-54-3

TWA: 72 mg/m<sup>3</sup>; 20 ppm

cyclohexane

Index No. 601-017-00-1 / EC No. 203-806-2 / CAS No. 110-82-7

TWA: 350 mg/m<sup>3</sup>; 100 ppm

STEL: 1050 mg/m<sup>3</sup>; 300 ppm

**Additional information**

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

**DNEL:**

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3

DNEL long-term dermal (systemic), Workers: 384 mg/kg bw/day

DNEL acute inhalative (local), Workers: 384 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 384 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers: 192 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 192 mg/m<sup>3</sup>

Ethyl acetate

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

DNEL short-term oral (acute), Workers:

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

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 short-term oral (acute), Consumer:

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

cyclohexane

Index No. 601-017-00-1 / EC No. 203-806-2 / CAS No. 110-82-7

DNEL long-term dermal (systemic), Workers: 2016 mg/kg bw/day

DNEL acute inhalative (local), Workers: 700 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 700 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 700 mg/m<sup>3</sup>

Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane

EC No. 926-605-8

DNEL long-term dermal (systemic), Workers: 13964 mg/kg

DNEL long-term inhalative (systemic), Workers: 5306 mg/m<sup>3</sup>

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

EC No. 921-024-6

DNEL long-term dermal (systemic), Workers: 733 mg/kg

DNEL long-term inhalative (systemic), Workers: 2035 mg/m<sup>3</sup>

Hydrocarbons, C6, isoalkanes, <5% n-hexane

EC No. 931-254-9

DNEL long-term dermal (systemic), Workers: 13964 mg/kg

DNEL long-term inhalative (systemic), Workers: 5306 mg/m<sup>3</sup>

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

EC No. 927-510-4

DNEL long-term dermal (systemic), Workers: 300 mg/kg

DNEL long-term inhalative (systemic), Workers: 2085 mg/m<sup>3</sup>

**PNEC:**

Toluene

Index No. 601-021-00-3 / EC No. 203-625-9 / CAS No. 108-88-3

PNEC aquatic, freshwater: 0,68 mg/L

PNEC aquatic, marine water: 0,68 mg/L

PNEC aquatic, intermittent release: 0,68 mg/L

PNEC sediment, freshwater: 16,39 mg/kg d.w.

PNEC sediment, marine water: 16,39 mg/kg d.w.

PNEC, soil: 2,89 mg/kg d.w.

PNEC sewage treatment plant (STP): 13,61 mg/L

Ethyl acetate

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

PNEC aquatic, freshwater: 0,26 mg/L

PNEC aquatic, marine water: 0,026 mg/L

PNEC aquatic, intermittent release: 1,65 mg/L

PNEC sediment, freshwater: 1,25 mg/kg

PNEC sediment, marine water: 0,125 mg/kg

PNEC, soil: 0,24 mg/kg

PNEC sewage treatment plant (STP): 650 mg/L

cyclohexane

Index No. 601-017-00-1 / EC No. 203-806-2 / CAS No. 110-82-7

PNEC aquatic, freshwater: 0,207 mg/L

PNEC aquatic, marine water: 0,207 mg/L

PNEC aquatic, intermittent release: 0,207 mg/L

PNEC, soil: 2,99 mg/kg

PNEC sewage treatment plant (STP): 3,24 mg/L

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. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number. Use combination filters according to EN 14387.

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Suitable respiratory protection apparatus: ABEK-P2

**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 eye glasses with side protection according to EN 166.

**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 \*

<b>Physical state:</b>	<b>Liquid</b>
<b>Appearance:</b>	<b>Liquid</b>
<b>Colour:</b>	<b>colourless</b>
<b>Odour:</b>	<b>like Solvents</b>
<b>Odour threshold:</b>	<b>not applicable</b>
<b>Melting point/freezing point:</b>	<b>-154 °C</b> Source: Hydrocarbons, C6, isoalkanes, <5% n-hexane
<b>Initial boiling point and boiling range:</b>	<b>55 °C</b> Source: Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane
<b>Flammability:</b>	<b>Highly flammable liquid and vapour.</b>
<b>Lower and upper explosion limit:</b>	
<b>Lower explosion limit:</b>	<b>0,8 Vol-%</b> Source: Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
<b>Upper explosion limit:</b>	<b>12,8 Vol-%</b> Source: Ethyl acetate
<b>Flash point:</b>	<b>-25 °C</b>
<b>Auto-ignition temperature:</b>	<b>&gt; 200 °C</b> Source: Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane
<b>Decomposition temperature:</b>	<b>not applicable</b>
<b>pH at 20 °C:</b>	<b>not relevant</b>
<b>Cinematic viscosity (40°C):</b>	<b>20 mm<sup>2</sup>/s</b>
<b>Viscosity at 20 °C:</b>	<b>12 s 4 mm</b> Method: DIN 53211
<b>Solubility(ies):</b>	
<b>Water solubility at 20 °C:</b>	<b>insoluble</b>
<b>Partition coefficient: n-octanol/water:</b>	<b>see section 12</b>
<b>Vapour pressure at 20 °C:</b>	<b>227 mbar</b> Source: Hydrocarbons, C6, isoalkanes, <5% n-hexane
<b>Density and/or relative density:</b>	
<b>Density at 20 °C:</b>	<b>0,80 g/cm<sup>3</sup></b>
<b>Relative vapour density:</b>	<b>not applicable</b>
<b>particle characteristics:</b>	<b>not applicable</b>



## 9.2. Other information

### 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

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 \*

##### Acute toxicity

###### Toluene

oral, LD50, Rat: 5580 mg/kg

Method: OECD 401

dermal, LD50, Rabbit: > 5000 mg/kg

inhalative (vapours), LC50, Rat: 28,1 mg/L (4 h)

Method: OECD 403

###### Ethyl acetate

oral, LD50, Rat: > 2000 mg/kg

dermal, LD50, Rabbit: > 18000 mg/kg

inhalative (vapours), LC50, Rat: > 22,5 mg/L (6 h); Evaluation The substance or mixture has no acute respiratory toxicity

###### Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane

oral, LD50, Rat: > 5000 mg/kg

Method: OECD 401

dermal, LD50, Rabbit: > 2000 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: > 20 mg/L (4 h)

Method: OECD 403

###### Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

oral, LD50, Rat: > 5000 mg/kg

Method: OECD 401

dermal, LD50, Rat: > 2000 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: > 20 mg/L (4 h)

Method: OECD 403

###### Hydrocarbons, C6, isoalkanes, <5% n-hexane

oral, LD50, Rat: > 5000 mg/kg

Method: OECD 401

dermal, LD50, Rat: > 3000 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: > 20 mg/L (4 h)

Method: OECD 403

###### Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

oral, LD50, Rat: > 5840 mg/kg

Method: OECD 401

dermal, LD50, Rat: > 2920 mg/kg

Method: OECD 402

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inhalative (vapours), LC50, Rat: 23,3 mg/L (4 h)  
Method: OECD 403

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

Causes skin irritation.

Causes serious eye irritation.

Toluene

Skin, Rabbit: Evaluation Irritating to skin.

Method: OECD 404

The product is skin resorptive.

eyes, Rabbit: Evaluation no eye irritation

Method: OECD 405

Ethyl acetate

Skin, Rabbit (4 h): Evaluation non-irritant.

eyes, Rabbit: Evaluation mild irritant.

Method: OECD 405

**Respiratory or skin sensitisation**

Ethyl acetate

Skin, Skin sensitization according to Magnusson/Kligman (maximization test), Guinea pig: ; Evaluation not sensitising.

Method: OECD 406

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

Suspected of damaging the unborn child.

Ethyl acetate

Reproductive toxicity; Evaluation From the available data there are no indications of reproductive toxicity.

genotoxicity; Evaluation No evidence of a mutagenic effect.

Method: OECD 471 (Ames test)

in-vitro; Salmonella typhimurium; with and without metabolic activation

genotoxicity; Evaluation negative

Method: OECD 473

in-vitro; Chinese hamster ovary cells; with and without metabolic activation

genotoxicity; Evaluation negative

Method: OECD 476

in-vitro; mouse lymphoma cells; with and without metabolic activation

genotoxicity; Evaluation negative

Method: OECD 474

in-vivo; Mouse

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

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

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

**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.

**Remark**

There is no information available on the preparation itself .

11.2. **Information on other hazards**

**Endocrine disrupting properties**



No information available.

## 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

#### Toluene

Fish toxicity, LC50, Oncorhynchus kisutch (silver salmon): 5,5 mg/L (96 h)  
Algae toxicity, EC50, Chlamydomonas angulosa: 134 mg/L (3 h)  
Bacterial toxicity, EC50, Nitrosomonas sp: 84 mg/L (24 h)  
Daphnia toxicity, LC50, Ceriodaphnia dubia: 3,78 mg/L (48 h)  
Method: US-EPA-Method

#### Ethyl acetate

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 230 mg/L (96 h)  
Flow test  
Daphnia toxicity, EC50, Daphnia cucullata: 165 mg/L (48 h)  
aquatic, freshwater  
Algae toxicity, ErC50, Desmodesmus subspicatus: > 100 mg/L (72 h)  
Method: OECD 201  
Bacteria toxicity, NOEC, Pseudomonas putida: 650 mg/L (16 h)  
Method: DIN 38412  
Fish toxicity, EC50: 220 mg/L (96 h)  
Daphnia toxicity, EC50, Artemia salina: 346 mg/L (24 h)  
aquatic, marine water

#### Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane

Fish toxicity, LL50, Oncorhynchus mykiss (Rainbow trout): 12 mg/L (96 h)  
Daphnia toxicity, EL50, Daphnia magna (Big water flea): 3 mg/L (48 h)  
Algae toxicity, ErL50, Pseudokirchneriella subcapitata: 55 mg/L (72 h)

#### Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Fish toxicity, LL50, Oncorhynchus mykiss (Rainbow trout): 11,4 mg/L (96 h)  
Method: OECD 203  
Daphnia toxicity, EL50, Daphnia magna (Big water flea): 3 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, EL50, Pseudokirchneriella subcapitata: 30 mg/L (72 h)  
Method: OECD 201

#### Hydrocarbons, C6, isoalkanes, <5% n-hexane

Fish toxicity, LC50, Oryzias latipes (Ricefish): > 1 mg/L (48 h)  
Daphnia toxicity, LC50, Daphnia magna (Big water flea): 3,87 mg/L (48 h)  
Algae toxicity, ErL50, Pseudokirchneriella subcapitata: 55 mg/L (72 h)

#### Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Fish toxicity, LL50, Oncorhynchus mykiss (Rainbow trout): 13,4 mg/L (96 h)  
Algae toxicity, EL50, Pseudokirchneriella subcapitata 10 - 30 mg/L (72 h)  
Daphnia toxicity, EL50, Daphnia magna: 3 mg/L (48 h)

### Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

#### Toluene

Fish toxicity, NOEC, Oncorhynchus kisutch (silver salmon): 1,39 mg/L (40 d)  
Daphnia toxicity, NOEC, Ceriodaphnia dubia: 0,74 mg/L (7 d)  
Method: US EPA 600/4-91-003  
Daphnia toxicity, LC50, Ceriodaphnia dubia: 3,78 mg/L (2 d)  
Daphnia toxicity, EC50, Ceriodaphnia dubia: 3,23 mg/L (7 d)  
Method: US EPA 600/4-91-003  
Fish toxicity, LOEC, Oncorhynchus kisutch (silver salmon): 2,77 mg/L (40 d)  
Daphnia toxicity, LOEC, Ceriodaphnia dubia: 2,76 mg/L (7 d)  
Method: US EPA 600/4-91-003

#### 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)

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Bacteria toxicity, NOEC, Pseudomonas putida: 650 mg/L (16 h)  
Method: DIN 38412

Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane  
Algae toxicity, NOELR, Pseudokirchneriella subcapitata: 30 mg/L (72 h)

Hydrocarbons, C6, isoalkanes, <5% n-hexane  
Algae toxicity, NOELR, Pseudokirchneriella subcapitata: 30 mg/L (72 h)

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics  
Daphnia toxicity, NOELR, Daphnia magna: 1 mg/L (21 day(s))  
Daphnia toxicity, EL50, Daphnia magna: 1,6 mg/L (21 day(s))  
Algae toxicity, NOELR, Pseudokirchneriella subcapitata: 10 mg/L (72 h)

**12.2. Persistence and degradability** \*

Toluene  
Biodegradation: 86 % (20 d); Evaluation Readily biodegradable

Ethyl acetate  
Biodegradation, aerobic: 69 % (20 d); Evaluation Readily biodegradable  
oxygen consumption: 62 % (5 d)

Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane  
Biodegradation: 98 % (28 d); Evaluation Readily biodegradable

Hydrocarbons, C6, isoalkanes, <5% n-hexane  
Biodegradation: 98 % (28 d); Evaluation Readily biodegradable  
Method: OECD 301F

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics  
Biodegradation: 98 % (28 d)

**12.3. Bioaccumulative potential** \*

Toluene  
Partition coefficient: n-octanol/water: 2,73

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

**Bioconcentration factor (BCF)**

Toluene  
Bioconcentration factor (BCF): 90

Ethyl acetate  
Bioconcentration factor (BCF), Leuciscus idus (golden orfe): 30

**12.4. Mobility in soil** \*

Ethyl acetate  
soil, Adsorption: Evaluation Due to the low n-octanol/water distribution coefficient, adsorption on the ground is not to be expected.

**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. Endocrine disrupting properties**

No information available.

**12.7. 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.

Observe in addition any national regulations!

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

140603\* other solvents and solvent mixtures

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

**Appropriate disposal / Package**

**Dispose of packaging and contaminated filters at a official hazardous waste incinerator facility.**

Recommendation:

Waste codes / waste designations according to EWC / AVV: 15 01 10\*

Non-contaminated packages may be recycled.

**SECTION 14: Transport information**

**14.1. UN number or ID number**

UN 1993

**14.2. UN proper shipping name**

Land transport (ADR/RID):

Flammable liquid, n.o.s.  
(ethyl acetate)

Sea transport (IMDG):

FLAMMABLE LIQUID, N.O.S.

(ethyl acetate, hydrocarbons, C6-C7, isoalkane cyclics, <5% n-hexan)

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

Flammable liquid, n.o.s.  
(ethyl acetate)

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

3

**14.4. Packing group**

II

**14.5. Environmental hazards**

Land transport (ADR/RID)

DANGEROUS FOR THE ENVIRONMENT

Marine pollutant

p / hydrocarbons, C6-C7, isoalkane

**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/E

special prescription 640D

**Sea transport (IMDG)**

EmS-No.

F-E, S-E

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

No transport as bulk according IBC - Code.

**SECTION 15: Regulatory information**

**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]**

VOC-value (in g/L): 813

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

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**Further details:**

For professional use only. Product is not intended for consumer use.

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

AICS listed  
 DSL listed  
 EHS no information  
 IECSC listed  
 KECI listed  
 MITI not listed  
 NZLoC no information  
 PICCS listed  
 TCSI no information  
 TSCA listet

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.
205-500-4 141-78-6	Ethyl acetate	01-2119475103-46
203-625-9 108-88-3	Toluene	01-2119471310-51
926-605-8	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	01-2119486291-36
921-024-6	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	01-2119475514-35
927-510-4	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	01-2119475515-33
931-254-9	Hydrocarbons, C6, isoalkanes, <5% n-hexane	01-2119484651-34
203-777-6 110-54-3	n-Hexane	01-2119480412-44
203-806-2 110-82-7	cyclohexane	01-2119463273-41

**SECTION 16: Other information**

\*

**Full text of classification in section 3**

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.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Repr. 2 / H361	Reproductive toxicity	Suspected of damaging the unborn child.
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Repr. 2 / H361	Reproductive toxicity	Suspected of damaging fertility.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.

**Classification procedure**

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

Flam. Liq. 2	Flammable liquids	On basis of test data.
Skin Irrit. 2	Skin corrosion/irritation	Calculation method.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
Repr. 2	Reproductive toxicity	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
STOT RE 2	STOT-repeated exposure	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

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**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
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