

## Safety Data Sheet

according to UK REACH Regulation

### PAP Rapid Dyeing Solution I

Revision date: 08.08.2023

Product code: 14691.xxxxx

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

##### 1.1. Product identifier

PAP Rapid Dyeing Solution I

UFI: V9P9-T1V9-N00N-RK3V

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

###### Use of the substance/mixture

Use as laboratory reagent. The product is intended for research, analysis and scientific education.

###### Uses advised against

Any non-intended use.

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

|                 |                                    |                                   |
|-----------------|------------------------------------|-----------------------------------|
| Company name:   | MORPHISTO GmbH                     |                                   |
| Street:         | Schumannstr. 142/144               |                                   |
| Place:          | D-63069 Offenbach                  |                                   |
| Telephone:      | +49 (0) 69 / 400 3019-60           | Telefax: +49 (0) 69 / 400 3019-64 |
| E-mail:         | info@morphisto.de                  |                                   |
| Contact person: | Morphisto GmbH                     |                                   |
| E-mail:         | gefahrstoffmanagement@morphisto.de |                                   |
| Internet:       | http://www.morphisto.de            |                                   |

##### 1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

#### SECTION 2: Hazards identification

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

###### GB CLP Regulation

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### GB CLP Regulation

###### Hazard components for labelling

Acetic acid%  
aluminum sulfate

Signal word: Danger

Pictograms:



###### Hazard statements

H318 Causes serious eye damage.

###### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.

##### 2.3. Other hazards

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This substance/mixture contains no components considered to be either persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher. Ecological information: The substance/mixture does not contain any components that are considered to be hazardous according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in amounts of 0.1 % or more have endocrine disrupting properties. Toxicological information: The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

| CAS No     | Chemical name  |              |                  | Quantity  |
|------------|--|--------------|------------------|-----------|
|            | EC No  | Index No     | REACH No         |           |
|            | Classification (GB CLP Regulation)                           |              |                  |           |
| 64-19-7    | Acetic acid%   |              |                  | 1 - < 5 % |
|            | 200-580-7  | 607-002-00-6 | 01-2119475328-30 |           |
|            | Flam. Liq. 3, Skin Corr. 1A; H226 H314                       |              |                  |           |
| 64-17-5    | Ethanol  |              |                  | 1 - < 5 % |
|            | 200-578-6  | 603-002-00-5 | 01-2119457610-43 |           |
|            | Flam. Liq. 2, Eye Irrit. 2; H225 H319                        |              |                  |           |
| 10043-01-3 | aluminum sulfate   |              |                  | 1 - < 5 % |
|            | 233-135-0  |              | 01-2119531538-36 |           |
|            | Eye Dam. 1; H318   |              |                  |           |
| 78-93-3    | butanone   |              |                  | < 0.1 %   |
|            | 201-159-0  | 606-002-00-3 | 01-2119457290-43 |           |
|            | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066 |              |                  |           |

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

##### Specific Conc. Limits, M-factors and ATE

| CAS No     | EC No  | Chemical name    | Quantity  |
|------------|--|------------------|-----------|
|            | Specific Conc. Limits, M-factors and ATE   |                  |           |
| 64-19-7    | 200-580-7  | Acetic acid%     | 1 - < 5 % |
|            | inhalation: LC50 = >40 mg/l (vapours); oral: LD50 = 3530 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 |                  |           |
| 64-17-5    | 200-578-6  | Ethanol          | 1 - < 5 % |
|            | inhalation: LC50 = 124,7 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg Eye Irrit. 2; H319: >= 50 - 100  |                  |           |
| 10043-01-3 | 233-135-0  | aluminum sulfate | 1 - < 5 % |
|            | dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg   |                  |           |
| 78-93-3    | 201-159-0  | butanone         | < 0.1 %   |
|            | dermal: LD50 = >2000 mg/kg; oral: LD50 = 2054 mg/kg  |                  |           |

##### Further Information

This product contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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**General information**

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

**After inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with: Water and soap. If skin irritation occurs: Get medical advice/attention.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek 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**

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Atomized water.

**Unsuitable extinguishing media**

High power water jet.

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

Non-flammable. In case of fire may be liberated: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulphur oxides

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Suppress gases/vapours/mists with water spray jet. 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****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Ventilate affected area.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided.

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

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Use extractor hood (laboratory). Personal protection equipment: see section 8

#### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

#### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off immediately all contaminated clothing and wash it before reuse. Always close containers tightly after the removal of product.

#### **Further information on handling**

Avoid contact with skin, eyes and clothes.  
 General protection and hygiene measures: See section 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.  
 Suitable material for Container: polyethylene. Glass.  
 Unsuitable materials for Container: Aluminium. Zinc.

#### **Hints on joint storage**

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

#### **Further information on storage conditions**

Store small packages in a suitable, robust cabinet.  
 Keep the packing dry and well sealed to prevent contamination and absorption of humidity.  
 Recommended storage temperature: 15-25 °C  
 Protect against: frost. UV-radiation/sunlight. heat. Humidity

### 7.3. Specific end use(s)

Use as laboratory reagent.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### **Exposure limits (EH40)**

| CAS No  | Substance                         | ppm  | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|---------|-----------------------------------|------|-------------------|-----------|---------------|--------|
| 64-19-7 | Acetic acid                       | 10   | 25                |           | TWA (8 h)     | WEL    |
|         |                                   | 20   | 50                |           | STEL (15 min) | WEL    |
| 78-93-3 | Butan-2-one (methyl ethyl ketone) | 200  | 600               |           | TWA (8 h)     | WEL    |
|         |                                   | 300  | 899               |           | STEL (15 min) | WEL    |
| 64-17-5 | Ethanol                           | 1000 | 1920              |           | TWA (8 h)     | WEL    |

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**Biological Monitoring Guidance Values (EH40)**

| CAS No  | Substance   | Parameter   | Value     | Test material | Sampling time |
|---------|-------------|-------------|-----------|---------------|---------------|
| 78-93-3 | Butan-2-one | butan-2-one | 70 µmol/L | urine         | Post shift    |

**DNEL/DMEL values**

| CAS No  | Substance    | DNEL type                | Exposure route | Effect   | Value                  |
|---------|--------------|--------------------------|----------------|----------|------------------------|
| 64-19-7 | Acetic acid% | Worker DNEL, long-term   | inhalation     | local    | 25 mg/m <sup>3</sup>   |
|         |              | Worker DNEL, acute       | inhalation     | local    | 25 mg/m <sup>3</sup>   |
|         |              | Consumer DNEL, long-term | inhalation     | local    | 25 mg/m <sup>3</sup>   |
|         |              | Consumer DNEL, acute     | inhalation     | local    | 25 mg/m <sup>3</sup>   |
| 64-17-5 | Ethanol      | Worker DNEL, acute       | inhalation     | local    | 1900 mg/m <sup>3</sup> |
|         |              | Worker DNEL, long-term   | dermal         | systemic | 343 mg/kg bw/day       |
|         |              | Worker DNEL, long-term   | inhalation     | systemic | 950 mg/m <sup>3</sup>  |
|         |              | Consumer DNEL, acute     | inhalation     | local    | 950 mg/m <sup>3</sup>  |
|         |              | Consumer DNEL, long-term | dermal         | systemic | 206 mg/kg bw/day       |
|         |              | Consumer DNEL, long-term | inhalation     | systemic | 114 mg/m <sup>3</sup>  |
|         |              | Consumer DNEL, long-term | oral           | systemic | 87 mg/kg bw/day        |

**PNEC values**

| CAS No  | Substance    | Environmental compartment                        | Value       |
|---------|--------------|--|-------------|
| 64-19-7 | Acetic acid% | Freshwater                                       | 3,058 mg/l  |
|         |              | Freshwater (intermittent releases)               | 30,58 mg/l  |
|         |              | Marine water                                     | 0,306 mg/l  |
|         |              | Freshwater sediment                              | 11,36 mg/kg |
|         |              | Marine sediment                                  | 1,136 mg/kg |
|         |              | Micro-organisms in sewage treatment plants (STP) | 85 mg/l     |
|         |              | Soil   | 0,47 mg/kg  |
| 64-17-5 | Ethanol      | 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   |
|         |              | Marine sediment                                  | 2,9 mg/kg   |
|         |              | Secondary poisoning                              | 0,72 mg/kg  |
|         |              | Micro-organisms in sewage treatment plants (STP) | 580 mg/l    |
|         |              | Soil   | 0,63 mg/kg  |

**8.2. Exposure controls**

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**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation as well as local exhaustion at critical locations. Use extractor hood (laboratory).

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: goggles. Tightly sealed safety glasses. EN 166

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Pull-over gloves of rubber. EN ISO 374

Suitable material:

(penetration time (maximum wearing period):  $\geq 8$  h):

Butyl rubber.

FKM (fluororubber).

(penetration time (maximum wearing period):  $\geq 2$  Stunden):

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

**Skin protection**

Use of protective clothing. Suitable protective clothing: Lab apron.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. Usually no personal respirative protection necessary.

Respiratory protection necessary at:

exceeding exposure limit values

aerosol or mist generation.

Suitable respiratory protection apparatus: Combination filtering device (EN 14387) - Type: AP2/P3

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.

**Environmental exposure controls**

Do not empty into drains.

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

|   |                |                |
|---|----------------|----------------|
| Physical state:   | liquid         |                |
| Colour:   | red brown      |                |
| Odour:  | characteristic |                |
| Melting point/freezing point:                             |                | not determined |
| Boiling point or initial boiling point and boiling range: |                | not determined |
| Flammability:   |                | not determined |

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|  |                        |
|--|------------------------|
| Lower explosion limits:                        | not determined         |
| Upper explosion limits:                        | not determined         |
| Flash point:                                   | not determined         |
| Auto-ignition temperature:                     | not determined         |
| Decomposition temperature:                     | not determined         |
| pH-Value (at 20 °C):                           | 2-3                    |
| Viscosity / kinematic:                         | not determined         |
| Water solubility:<br>(at 20 °C)                | completely miscible    |
| Solubility in other solvents<br>not determined |                        |
| Partition coefficient n-octanol/water:         | not determined         |
| Vapour pressure:<br>(at 20 °C)                 | 23 hPa                 |
| Vapour pressure:<br>(at 50 °C)                 | 123 hPa                |
| Density (at 20 °C):                            | 1,00 g/cm <sup>3</sup> |
| Relative vapour density:                       | not determined         |
| Particle characteristics:                      | not applicable         |

**9.2. Other information****Information with regard to physical hazard classes**

## Explosive properties

The product is not: Explosive.

## Oxidizing properties

none

**Other safety characteristics**

## Solid content:

not determined

## Sublimation point:

not determined

## Softening point:

not determined

## Pour point:

not determined

## Viscosity / dynamic:

not determined

## Flow time:

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: UV-radiation/sunlight. heat.

**10.5. Incompatible materials**

Materials to avoid: Alkali metals. Oxidizing agents, strong. peroxides. Hydrogenium peroxide. Nitric acid.

Strong acid.

**10.6. Hazardous decomposition products**In case of fire may be liberated: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulphur oxides**SECTION 11: Toxicological information**

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**11.1. Information on hazard classes as defined in GB CLP Regulation**
**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

| CAS No     | Chemical name           |               |          |        |                |  |
|------------|-------------------------|---------------|----------|--------|----------------|--|
|            | Exposure route          | Dose          | Species  | Source | Method         |  |
| 64-19-7    | Acetic acid%            |               |          |        |                |  |
|            | oral                    | LD50<br>mg/kg | 3530     | Rat    | GESTIS         |  |
|            | inhalation (4 h) vapour | LC50          | >40 mg/l | Rat    | suppliers SDS. |  |
| 64-17-5    | Ethanol                 |               |          |        |                |  |
|            | oral                    | LD50<br>mg/kg | >5000    | Rat    | ECHA Dossier   |  |
|            | dermal                  | LD50<br>mg/kg | >2000    | Rabbit | ECHA Dossier   |  |
|            | inhalation (4 h) vapour | LC50<br>mg/l  | 124,7    | Rat    | ECHA Dossier   |  |
| 10043-01-3 | aluminum sulfate        |               |          |        |                |  |
|            | oral                    | LD50<br>mg/kg | >5000    | Rat    | suppliers SDS. |  |
|            | dermal                  | LD50<br>mg/kg | >5000    | Rabbit | suppliers SDS. |  |
| 78-93-3    | butanone                |               |          |        |                |  |
|            | oral                    | LD50<br>mg/kg | 2054     | Ratte  | SDB Lieferant  |  |
|            | dermal                  | LD50<br>mg/kg | >2000    | Rabbit | ECHA Dossier   |  |

**Irritation and corrosivity**

Causes serious eye damage.

Skin corrosion/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**

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

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

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

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

**Other information**

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



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## SECTION 12: Ecological information

### 12.1. Toxicity

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

| CAS No     | Chemical name            |               |           |         |                                      |                          |
|------------|--------------------------|---------------|-----------|---------|--------------------------------------|--------------------------|
|            | Aquatic toxicity         | Dose          | [h]   [d] | Species | Source                               | Method                   |
| 64-19-7    | Acetic acid%             |               |           |         |                                      |                          |
|            | Acute fish toxicity      | LC50<br>mg/l  | >300      | 96 h    | Oncorhynchus mykiss                  | ECHA Dossier             |
|            | Acute algae toxicity     | ErC50<br>mg/l | >300      | 72 h    | Skeletonema costatum                 | ECHA Dossier             |
|            | Acute crustacea toxicity | EC50<br>mg/l  | >300      | 48 h    | Daphnia magna                        | ECHA Dossier             |
| 64-17-5    | Ethanol                  |               |           |         |                                      |                          |
|            | Acute fish toxicity      | LC50<br>mg/l  | 14200     | 96 h    | Pimephales promelas (fathead minnow) | ECHA Dossier             |
|            | Acute algae toxicity     | ErC50         | 275 mg/l  | 72 h    | Chlorella vulgaris                   | ECHA Dossier             |
|            | Acute crustacea toxicity | EC50<br>mg/l  | 5012      | 48 h    | Ceriodaphnia dubia (water flea)      | ECHA Dossier             |
|            | Crustacea toxicity       | NOEC          | 9,6 mg/l  | 9 d     | Daphnia magna                        | ECHA Dossier             |
| 10043-01-3 | aluminum sulfate         |               |           |         |                                      |                          |
|            | Acute fish toxicity      | LC50<br>mg/l  | >1000     | 96 h    | Danio rerio (zebrafish)              | suppliers SDS.           |
|            | Acute crustacea toxicity | EC50<br>mg/l  | >160      | 48 h    | Daphnia magna                        | suppliers SDS.           |
| 78-93-3    | butanone                 |               |           |         |                                      |                          |
|            | Acute fish toxicity      | LC50<br>mg/l  | 2993      | 96 h    | Pimephales promelas                  | ECHA Dossier<br>OECD 203 |
|            | Acute algae toxicity     | ErC50<br>mg/l | 1972      | 72 h    | Pseudokirchnerella subcapitata       | ECHA Dossier<br>OECD 201 |
|            | Acute crustacea toxicity | EC50          | 308 mg/l  | 48 h    | Daphnia magna                        | ECHA Dossier<br>OECD 202 |

### 12.2. Persistence and degradability

The product has not been tested.

| CAS No  | Chemical name   |       |    |                |
|---------|---|-------|----|----------------|
|         | Method  | Value | d  | Source         |
|         | Evaluation  |       |    |                |
| 64-19-7 | Acetic acid%  |       |    |                |
|         | Other guideline   | 95%   | 5  | suppliers SDS. |
|         | Easily biodegradable (concerning to the criteria of the OECD) |       |    |                |
| 64-17-5 | Ethanol   |       |    |                |
|         | other guideline   | 84%   | 20 | ECHA Dossier   |
|         | Biodegradable.  |       |    |                |
| 78-93-3 | butanone  |       |    |                |
|         |   | 98%   | 28 | ECHA Dossier   |
|         | Readily biodegradable (according to OECD criteria).           |       |    |                |

### 12.3. Bioaccumulative potential

The product has not been tested.

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**Partition coefficient n-octanol/water**

| CAS No  | Chemical name | Log Pow |
|---------|---------------|---------|
| 64-19-7 | Acetic acid%  | -0,17   |
| 64-17-5 | Ethanol       | -0,31   |
| 78-93-3 | butanone      | 0,3     |

**BCF**

| CAS No  | Chemical name | BCF  | Species | Source |
|---------|---------------|------|---------|--------|
| 64-19-7 | Acetic acid%  | 3,16 |         |        |

**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 UK REACH.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Avoid release to the environment. Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, 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 (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**List of Wastes Code - used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**List of Wastes Code - 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**

Wash with plenty of water. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

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|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Inland waterways transport (ADN)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Marine transport (IMDG)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

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

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | No dangerous good in sense of this transport regulation. |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Not restricted

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

Not restricted

**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 3, Entry 40, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

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

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

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

Acetic acid%

Ethanol

aluminum sulfate

butanone

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16.

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**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 fuer Gefahrstoffe

TSCA: Toxic Substances Control Act

VOC: Volatile Organic Compounds

VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe

WGK: Wassergefaehrungsklasse

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

| Classification   | Classification procedure |
|------------------|--------------------------|
| Eye Dam. 1; H318 | Calculation method       |

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

|        |   |
|--------|---|
| H225   | Highly flammable liquid and vapour.                   |
| H226   | Flammable liquid and vapour.                          |
| H314   | Causes severe skin burns and eye damage.              |
| H318   | Causes serious eye damage.                            |
| H319   | Causes serious eye irritation.                        |
| H336   | May cause drowsiness or dizziness.                    |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. 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.)*