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

### 1.1. Product identifier

PT All-in-1 PLUS

**Further trade names**

Glass primer/activator
Glas-Primer/Aktivator
Activateur verre/primaire
Activador cristal/imprimación

UFI: GSXM-ANQU-JESV-K7R7

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

**Use of the substance/mixture**

Primer / adhesion promoter

**Uses advised against**

No information available.

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

| | |
|---|---|
| Company name: | PMA/TOOLS GmbH |
| Street: | Siemensring 42 |
| Place: | D-47877 Willich - Germany |
| Telephone: | +49 2154 922230 |
| E-mail: | info@pma-tools.de |
| Contact person: | Labor |
| E-mail: | msds@pma-tools.de (Please DO NOT use for requesting Safety Data Sheets.) |
| Internet: | www.pma-tools.de |
| Responsible Department: | Laboratory |

### 1.4. Emergency telephone number:

Telephone number of the company in case of emergencies (24 h):
+49 (0) 700 / 24 112 112 (PMR)
+1 872 5888271 (PMR)

Emergency information services / official advisory body:
<UK> National Poisons Information Service (24 h): 0870 600 6266 (UK only)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GB CLP Regulation**

Flam. Liq. 2; H225
Eye Irrit. 2; H319
STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

**GB CLP Regulation**

**Hazard components for labelling**

butanone
ethyl acetate

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |

**Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P261 | Avoid breathing vapour. |
| P280 | Wear protective gloves and eye protection/face protection. |
| P370+P378 | In case of fire: Use Foam, Extinguishing powder, Carbon dioxide (CO2) to extinguish. |

**Special labelling of certain mixtures**

| | |
|---|---|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| EUH204 | Contains isocyanates. May produce an allergic reaction. |

### 2.3. Other hazards

Solvents contained in the product evaporate during processing and their vapors can form explosive/highly inflammable air/vapor mixtures. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Chemical characterization**

Primer, solvent based, Mixture of the following substances with non-hazardous additions.

**Hazardous components**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 141-78-6 | ethyl acetate | | | 30 - < 35 % |
| | 205-500-4 | 607-022-00-5 | 01-2119475103-46 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066 | | | |
| 78-93-3 | butanone | | | 30 - < 35 % |
| | 201-159-0 | 606-002-00-3 | 01-2119457290-43 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066 | | | |
| 123-86-4 | n-butyl acetate | | | 5 - < 10 % |
| | 204-658-1 | 607-025-00-1 | 01-2119485493-29 | |
| | Flam. Liq. 3, STOT SE 3; H226 H336 EUH066 | | | |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | | | 1 - < 5 % |
| | 223-981-9 | | 01-2119948848-16 | |
| | Acute Tox. 4; H302 | | | |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | | | < 1 % |
| | 223-810-8 | 615-012-00-7 | 01-2119980050-47 | |
| | Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3; H315 H319 H334 H335 EUH014 | | | |
| 79-10-7 | acrylic acid, prop-2-enoic acid | | | < 1 % |
| | 201-177-9 | 607-061-00-8 | 01-2119452449-31 | |
| | Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 2; H226 H332 H312 H302 H314 H335 H400 H411 | | | |

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 | | |
| 141-78-6 | 205-500-4 | ethyl acetate | 30 - < 35 % |
| | inhalation: LC50 = 200 mg/l (vapours); dermal: LD50 = >20.000 mg/kg; oral: LD50 = 6.100 mg/kg | | |
| 78-93-3 | 201-159-0 | butanone | 30 - < 35 % |
| | inhalation: LC50 = > 20 mg/l (vapours); dermal: LD50 = > 6.400 mg/kg; oral: LD50 = 2.737 mg/kg | | |
| 123-86-4 | 204-658-1 | n-butyl acetate | 5 - < 10 % |
| | inhalation: LC50 = >20 mg/l (vapours); inhalation: LC50 = >23,4 mg/l (dusts or mists); dermal: LD50 = >14.112 mg/kg; oral: LD50 = 10.760 mg/kg | | |
| 4151-51-3 | 223-981-9 | Tris(p-isocyanatophenyl) thiophosphate | 1 - < 5 % |
| | inhalation: LC50 = > 5,721 mg/l (dusts or mists); oral: ATE = 500 mg/kg | | |
| 4083-64-1 | 223-810-8 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | < 1 % |
| | inhalation: LC50 = 3.665 mg/l (dusts or mists); dermal: LD50 = > 2.000 mg/kg; oral: LD50 = 2.330 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100 STOT SE 3; H335: >= 5 - 100 | | |
| 79-10-7 | 201-177-9 | acrylic acid, prop-2-enoic acid | < 1 % |
| | inhalation: LC50 = > 5,1 mg/l (vapours); inhalation: LC50 = 1,5 mg/l (dusts or mists); dermal: LD50 = 1100 mg/kg; oral: LD50 = 500 mg/kg STOT SE 3; H335: >= 1 - 100 | | |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information**

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.
Never give anything by mouth to an unconscious person or a person with cramps.

**After inhalation**

Remove casualty to fresh air and keep warm and at rest.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

**After contact with eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Call a physician in any case!

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

eyes: Conjunctival oedema (chemosis).
Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

**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**

Carbon dioxide (CO2), Foam, Extinguishing powder
Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

Full water jet (Contains: Solvent)

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

In case of fire may be liberated: Gases/vapours, toxic

**5.3. Advice for firefighters**

Use personal protection equipment.
In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

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

**General advice**

Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Special danger of slipping by leaking/spilling product.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

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

**Other information**

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. Disposal: see section 13

### 6.4. Reference to other sections

Personal protection equipment: see section 8

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Use explosion-proof electrical equipment.
Use only antistatically equipped (spark-free) tools.
Provide earthing of containers, equipment, pumps and ventilation facilities.
Take precautionary measures against static discharges.

**Advice on general occupational hygiene**

Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. Draw up and observe skin protection programme.
When using do not eat or drink. Wash hands and face before breaks and after work and take a shower if necessary. Keep away from food, drink and animal feedingstuffs.

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

**Requirements for storage rooms and vessels**

Provide adequate ventilation.
storage temperature: 5 - 25°C
Keep in a cool, well-ventilated place.

### 7.3. Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Exposure limits (EH40)**

| CAS No | Substance | ppm | mg/m³ | fibres/ml | Category | Origin |
|---|---|---|---|---|---|---|
| 79-10-7 | Acrylic acid | 10 | 29 | | TWA (8 h) | WEL |
| | | 20 | 59 | | STEL (1 min) | WEL |
| 78-93-3 | Butan-2-one (methyl ethyl ketone) | 200 | 600 | | TWA (8 h) | WEL |
| | | 300 | 899 | | STEL (15 min) | WEL |
| 123-86-4 | Butyl acetate | 150 | 724 | | TWA (8 h) | WEL |
| | | 200 | 966 | | STEL (15 min) | WEL |
| 141-78-6 | Ethyl acetate | 200 | 734 | | TWA (8 h) | WEL |
| | | 400 | 1468 | | STEL (15 min) | WEL |
| - | Isocyanates, all (as -NCO) Except methyl isocyanate | - | 0.02 | | TWA (8 h) | WEL |
| | | - | 0.07 | | STEL (15 min) | WEL |

**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 |
| 141-78-6 | ethyl acetate | | | |
| Worker DNEL, acute | | inhalation | systemic | 1468 mg/m³ |
| Worker DNEL, acute | | inhalation | local | 1468 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 63 mg/kg bw/day |
| Worker DNEL, long-term | | inhalation | systemic | 734 mg/m³ |
| Worker DNEL, long-term | | inhalation | local | 734 mg/m³ |
| Consumer DNEL, acute | | oral | systemic | 734 mg/kg bw/day |
| Consumer DNEL, acute | | inhalation | local | 734 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 37 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 367 mg/m³ |
| Consumer DNEL, long-term | | oral | systemic | 4,5 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | local | 367 mg/m³ |
| 78-93-3 | butanone | | | |
| Worker DNEL, long-term | | dermal | systemic | 1161 mg/kg bw/day |
| Worker DNEL, long-term | | inhalation | systemic | 600 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 412 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 106 mg/m³ |
| Consumer DNEL, long-term | | oral | systemic | 31 mg/kg bw/day |
| 123-86-4 | n-butyl acetate | | | |
| Worker DNEL, long-term | | inhalation | systemic | 300 mg/m³ |
| Worker DNEL, acute | | inhalation | systemic | 600 mg/m³ |
| Worker DNEL, long-term | | inhalation | local | 300 mg/m³ |
| Worker DNEL, acute | | inhalation | local | 600 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 11 mg/kg bw/day |
| Worker DNEL, acute | | dermal | systemic | 11 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 35,7 mg/m³ |
| Consumer DNEL, acute | | inhalation | systemic | 300 mg/m³ |
| Consumer DNEL, acute | | inhalation | local | 300 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 6 mg/kg bw/day |
| Consumer DNEL, acute | | dermal | systemic | 6 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 2 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 2 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | local | 35,7 mg/m³ |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | | | |
| Worker DNEL, long-term | | inhalation | local | 0,047 mg/m³ |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | | | |
| Worker DNEL, long-term | | inhalation | systemic | 3,24 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 0,92 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 0,8 mg/m³ |

| | | | |
|---|---|---|---|
| Consumer DNEL, long-term | dermal | systemic | 0,46 mg/kg bw/day |
| Consumer DNEL, long-term | oral | systemic | 0,46 mg/kg bw/day |
| 79-10-7 | acrylic acid, prop-2-enoic acid | | |
| Worker DNEL, long-term | inhalation | local | 30 mg/m³ |
| Worker DNEL, acute | inhalation | local | 30 mg/m³ |
| Worker DNEL, acute | dermal | local | 1 mg/cm² |
| Consumer DNEL, acute | dermal | local | 1 mg/cm² |
| Consumer DNEL, acute | inhalation | local | 3,6 mg/m³ |
| Consumer DNEL, long-term | inhalation | local | 3,6 mg/m³ |

**PNEC values**

| CAS No | Substance | |
|---|---|---|
| Environmental compartment | | Value |
| 141-78-6 | ethyl acetate | |
| Freshwater | | 0,24 mg/l |
| Freshwater (intermittent releases) | | 1,65 mg/l |
| Marine water | | 0,024 mg/l |
| Freshwater sediment | | 1,15 mg/kg |
| Marine sediment | | 0,115 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 650 mg/l |
| Soil | | 0,148 mg/kg |
| Air | | 200 mg/kg |
| 78-93-3 | butanone | |
| Freshwater | | 55,8 mg/l |
| Marine water | | 55,8 mg/l |
| Freshwater sediment | | 284,74 mg/kg |
| Marine sediment | | 284,7 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 709 mg/l |
| Soil | | 22,5 mg/kg |
| Air | | 1000 mg/kg |
| 123-86-4 | n-butyl acetate | |
| Freshwater | | 0,18 mg/l |
| Marine water | | 0,018 mg/l |
| Freshwater sediment | | 0,981 mg/kg |
| Marine sediment | | 0,0981 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 35,6 mg/l |
| Soil | | 0,0903 mg/kg |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | |
| Freshwater | | 0,1 mg/l |
| Freshwater (intermittent releases) | | 1 mg/l |
| Marine water | | 0,01 mg/l |
| Freshwater sediment | | 2557 mg/kg |
| Marine sediment | | 155 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 100 mg/l |
| Soil | | 510 mg/kg |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | |
| Freshwater | | 0,03 mg/l |
| Marine water | | 0,003 mg/l |
| Freshwater sediment | | 0,172 mg/kg |
| Marine sediment | | 0,017 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 0,4 mg/l |
| Soil | | 0,017 mg/kg |
| 79-10-7 | acrylic acid, prop-2-enoic acid | |

| | |
|---|---|
| Freshwater | 0,003 mg/l |
| Marine water | 0,0003 mg/l |
| Freshwater sediment | 0,0236 mg/kg |
| Marine sediment | 0,00236 mg/kg |
| Secondary poisoning | 30 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | 0,9 mg/l |
| Soil | 1 mg/kg |

### 8.2. Exposure controls

**Appropriate engineering controls**

Use only outdoors or in a well-ventilated area. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection: goggles. (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. Breakthrough times and swelling properties of the material must be taken into consideration.
Wear suitable gloves. (EN 374).
Recommended material: Butyl caoutchouc (butyl rubber)
Thickness of the glove material: >= 0,7 mm
Breakthrough time:: Index No. 2, > 30 Min. / Index No. 6, > 480 Min.
Replace when worn.

**Skin protection**

Use personal protection equipment.
Wear anti-static footwear and clothing
When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. (89/686/EWG).
Recommended protective clothing articles: compliant EN 14605 / EN 13982.

**Respiratory protection**

In case of dangerous gases, vapours or dusts self-contained breathing apparatus or suitable masks and filters need to be advised. In case of inadequate ventilation wear respiratory protection.
Suitable respiratory protection apparatus: particle filter ABEK-P2 (EN 14387).

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| Physical state: | Liquid |
| Colour: | black |
| Odour: | like: Solvent |
| Odour threshold: | No data available |

**Test method**

**Changes in the physical state**

| | | |
|---|---|---|
| Melting point/freezing point: | < 50 °C | |
| Boiling point or initial boiling point and boiling range: | 80 °C | |
| Flash point: | -5,5 °C | ASTM D 3278 |

**Flammability**

| | | |
|---|---|---|
| Solid/liquid: | No data available | |

**Explosive properties**

No data available

| | | |
|---|---|---|
| Lower explosion limits: | 0,82 vol. % | |
| Upper explosion limits: | not applicable | |
| Auto-ignition temperature: | > 300 °C | |
| Decomposition temperature: | not applicable | |
| pH-Value: | not applicable | |
| Viscosity / dynamic: (at 23 °C) | 5 - 14 mPa·s | Physica Rheolab |
| Viscosity / kinematic: (at 20 °C) | 11 mm²/s | |
| Water solubility: (at 20 °C) | partially miscible | |

**Solubility in other solvents**

No data available

| | | |
|---|---|---|
| Partition coefficient n-octanol/water: | not applicable (Mixtures) | |
| Vapour pressure: (at 20 °C) | 94 hPa | |
| Vapour pressure: (at 50 °C) | 360 hPa | |
| Density (at 20 °C): | 0,98 g/cm³ | |
| Relative vapour density: | No data available | |
| Particle characteristics: | not applicable | |

## 9.2. Other information

**Information with regard to physical hazard classes**

Oxidizing properties

No data available

**Other safety characteristics**

| | | |
|---|---|---|
| Evaporation rate: | No data available | |

**Further Information**

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with : Water (Danger of bursting container. Formation of: Carbon dioxide (CO2).) Alcohols, Amines, Oxidising agent

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

See 10.1 Reactivity

### 10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from moisture.

### 10.5. Incompatible materials

See 10.1 Reactivity

### 10.6. Hazardous decomposition products

In case of warming: Formation of: Isocyanate

Reacts with : Humidity (Danger of bursting container. Formation of: Carbon dioxide (CO2).)

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in GB CLP Regulation

**Acute toxicity**

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

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

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

**ATEmix calculated**

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

| CAS No | Chemical name | | | | | |
|---|---|---|---|---|---|---|
| | Exposure route | Dose | | Species | Source | Method |
| 141-78-6 | ethyl acetate | | | | | |
| | oral | LD50 mg/kg | 6.100 | Rat | | |
| | dermal | LD50 mg/kg | >20.000 | Rabbit | | Draize Test |
| | inhalation (1 h) vapour | LC50 | 200 mg/l | Rat | | |
| 78-93-3 | butanone | | | | | |
| | oral | LD50 mg/kg | 2.737 | Rat | | |
| | dermal | LD50 mg/kg | > 6.400 | Rabbit | | |
| | inhalation (4 h) vapour | LC50 | > 20 mg/l | Rat | | |
| 123-86-4 | n-butyl acetate | | | | | |
| | oral | LD50 mg/kg | 10.760 | Rat | | OECD 423 |
| | dermal | LD50 mg/kg | >14.112 | Rabbit | | OECD 402 |
| | inhalation (4 h) vapour | LC50 | >20 mg/l | Rat | | |
| | inhalation (4 h) dust/mist | LC50 mg/l | >23,4 | Rat | | OECD 403 |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | | | | | |
| | oral | ATE mg/kg | 500 | | | |
| | inhalation (4 h) dust/mist | LC50 mg/l | > 5,721 | Rat | | OECD 403 |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | | | | | |
| | oral | LD50 mg/kg | 2.330 | Rat | | similar to OECD 401 |
| | dermal | LD50 mg/kg | > 2.000 | Rat | | OECD 402 |
| | inhalation (4 h) dust/mist | LC50 mg/l | 3.665 | Rat | | |
| 79-10-7 | acrylic acid, prop-2-enoic acid | | | | | |
| | oral | LD50 mg/kg | 500 | Rat | REACH Dossier | OECD 401 |
| | dermal | LD50 mg/kg | 1100 | Rabbit | REACH Dossier | OECD 402 |
| | inhalation (4 h) vapour | LC50 mg/l | > 5,1 | Rat | REACH Dossier | OECD 403 |
| | inhalation (4 h) dust/mist | LC50 | 1,5 mg/l | | | ATE |

**Irritation and corrosivity**

Serious eye damage/eye irritation: Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Repeated exposure may cause skin dryness or cracking.

**Sensitising effects**

Based on available data, the classification criteria are not met.
Contains isocyanates. May produce an allergic reaction.
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Repeated exposure may cause skin dryness or cracking.

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

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

**STOT-single exposure**

May cause drowsiness or dizziness. (ethyl acetate; butanone)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.
The mixture may be a skin sensitiser. It may also be a skin irritant and repeated contact may increase this effect.

**Aspiration hazard**

Based on available data, the classification criteria are not met.
There are no data available on the mixture itself.

### 11.2. Information on other hazards

**Endocrine disrupting properties**

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**Other information**

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP] The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

| CAS No | Chemical name | | | | | | |
|---|---|---|---|---|---|---|---|
| | Aquatic toxicity | Dose | | [h] \| [d] | Species | Source | Method |
| 141-78-6 | ethyl acetate | | | | | | |
| | Acute fish toxicity | LC50 | 270 mg/l | 96 h | Leuciscus idus (golden orfe) | | DIN 38412 / part 15 |
| | Acute algae toxicity | ErC50 | >2.000 mg/l | 96 h | Selenastrum capricornutum | | OECD 201 |
| | Acute crustacea toxicity | EC50 | 164 mg/l | 48 h | Daphnia pulex (water flea) | | OECD 202 |
| | Algae toxicity | NOEC | 2.000 mg/l | 4 d | Selenastrum capricornutum | | OECD 201 |
| | Crustacea toxicity | NOEC | 2,4 mg/l | 21 d | Daphnia magna (Big water flea) | | OECD 211 |
| 78-93-3 | butanone | | | | | | |
| | Acute fish toxicity | LC50 | 3.220 mg/l | 96 h | Pimephales promelas (fathead minnow) | | OECD 203 |
| | Acute algae toxicity | ErC50 | > 1.000 mg/l | | | | OECD 201 |
| | Acute crustacea toxicity | EC50 | 5.091 mg/l | 48 h | Daphnia magna (Big water flea) | Daphnia pulex (water flea) | OECD 202 |
| | Acute bacteria toxicity | EC50 | 1.150 mg/l ( ) | 0 h | | | OECD 209 |
| 123-86-4 | n-butyl acetate | | | | | | |
| | Acute fish toxicity | LC50 | 18 mg/l | 96 h | Pimephales promelas (fathead minnow) | | OECD 203 |
| | Acute algae toxicity | ErC50 | 674,7 mg/l | 72 h | Scenedesmus subspicatus | | OECD 201 |
| | Acute crustacea toxicity | EC50 | 44 mg/l | 48 h | Ceriodaphnia spec | | OECD 202 |
| | Crustacea toxicity | NOEC | 23,2 mg/l | 21 d | Daphnia magna (Big water flea) | | OECD 211 |
| | Acute bacteria toxicity | EC50 | 356 mg/l ( ) | | Tetrahymena pyriformis | | 40 h |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | | | | | | |
| | Acute fish toxicity | LC50 | Toxicity> Water solubility mg/l | 96 h | Danio rerio (zebrafish) | | OECD 203 |
| | Acute algae toxicity | ErC50 | Toxicity> Water solubility mg/l | | Scenedesmus subspicatus | | OECD 201 |
| | Algae toxicity | NOEC | Toxicity> Water solubility mg/l | | Scenedesmus subspicatus | | OECD 201 |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | | | | | | |
| | Acute fish toxicity | LC50 | > 45 mg/l | 96 h | Oncorhynchus mykiss (Rainbow trout) | | OECD 203 |
| | Acute algae toxicity | ErC50 | 30 mg/l | 72 h | Pseudokirchneriella subcapitata | | OECD 201 |
| | Acute crustacea toxicity | EC50 | > 100 mg/l | 48 h | Daphnia magna (Big water flea) | | OECD 209 |
| | Acute bacteria toxicity | EC50 | 2.511 mg/l ( ) | | activated sludge | | OECD 209 |
| 79-10-7 | acrylic acid, prop-2-enoic acid | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Acute fish toxicity | LC50 | 27 mg/l | 96 h | Onchorhynchus mykiss | | OECD 210 |
| | Acute algae toxicity | ErC50 mg/l | 0,13 | 72 h | Scenedesmus subspicatus | | OECD 201 |
| | Acute crustacea toxicity | EC50 | 95 mg/l | 48 h | Daphnia magna | | OECD 201 |
| | Fish toxicity | NOEC mg/l | >= 10,1 | 45 d | Orzyias latipes | | |
| | Crustacea toxicity | NOEC | 19 mg/l | 21 d | Daphnia magna (Big water flea) | | EPA OTS 797.1330 |

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

| CAS No | Chemical name | | | |
|---|---|---|---|---|
| | Method | Value | d | Source |
| | Evaluation | | | |
| 141-78-6 | ethyl acetate | | | |
| | OECD 301D | 100 % | 28 | |
| | Readily biodegradable (according to OECD criteria). | | | |
| 78-93-3 | butanone | | | |
| | OECD 301D | 98 % | 28 | |
| | Readily biodegradable (according to OECD criteria). | | | |
| 123-86-4 | n-butyl acetate | | | |
| | OECD 301D/ EEC 92/69/V, C.4-E | 83 % | 28 | |
| | Readily biodegradable (according to OECD criteria). | | | |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | | | |
| | OECD 301F | 58,2 % | 28 | |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | | | |
| | OECD 301D Aerobic biological treatment | 98 % | 28 | |
| | Readily biodegradable (according to OECD criteria). | | | |
| 79-10-7 | acrylic acid, prop-2-enoic acid | | | |
| | OECD 301D/ EEC 92/69/V, C.4-E | 81 % | 28 | |
| | Readily biodegradable (according to OECD criteria). | | | |
| | OECD 302B | 100 % | 28 | |
| | Evidence for inherent biodegradability. | | | |
| | OECD 301C | 68 % | 28 | REACH Dossier |
| | Readily biodegradable (according to OECD criteria). | | | |

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

| CAS No | Chemical name | Log Pow |
|---|---|---|
| 141-78-6 | ethyl acetate | 0,68 |
| 78-93-3 | butanone | 0,29 |
| 123-86-4 | n-butyl acetate | 2,3 |
| 4151-51-3 | Tris(p-isocyanatophenyl) thiophosphate | 8,27 |
| 4083-64-1 | 4-isocyanatosulphonyltoluene, tosyl isocyanate | 0,6 |
| 79-10-7 | acrylic acid, prop-2-enoic acid | 0,46 |

**BCF**

| CAS No | Chemical name | BCF | Species | Source |
|---|---|---|---|---|
| 141-78-6 | ethyl acetate | 30 | Leuciscus idus (golden orfe) | |
| 79-10-7 | acrylic acid, prop-2-enoic acid | 3,162 | | Quantitative structure-activity relationship (QSAR) |

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**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.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Send to a hazardous waste incinerator facility under observation of official regulations.
Do not allow to enter into surface water or drains.
The waste key according to the European Waste Catalogue (EWC number) refers to the real wastes origin and therefore is not product- but use-oriented.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Recommendation: EAK 080409

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

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

**Contaminated packaging**

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 1139
**14.2. UN proper shipping name:** Coating solution
**14.3. Transport hazard class(es):** 3
**14.4. Packing group:** II
Hazard label: 3


Classification code: F1

| | |
|---|---|
| Special Provisions: | 640D |
| Limited quantity: | 5 L |
| Excepted quantity: | E2 |
| Transport category: | 2 |
| Hazard No: | 33 |
| Tunnel restriction code: | D/E |

**Inland waterways transport (ADN)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1139 |
| **14.2. UN proper shipping name:** | Coating solution |
| **14.3. Transport hazard class(es):** | 3 |
| **14.4. Packing group:** | II |
| Hazard label: | 3 |


| | |
|---|---|
| Classification code: | F1 |
| Special Provisions: | 640D |
| Limited quantity: | 5 L |
| Excepted quantity: | E2 |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1139 |
| **14.2. UN proper shipping name:** | Coating solution |
| **14.3. Transport hazard class(es):** | 3 |
| **14.4. Packing group:** | II |
| Hazard label: | 3 |


| | |
|---|---|
| Special Provisions: | - |
| Limited quantity: | 5 L |
| Excepted quantity: | E2 |
| EmS: | F-E, S-E |

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

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1139 |
| **14.2. UN proper shipping name:** | Coating solution |
| **14.3. Transport hazard class(es):** | 3 |
| **14.4. Packing group:** | II |
| Hazard label: | 3 |


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

**14.5. Environmental hazards**

| | |
|---|---|
| ENVIRONMENTALLY HAZARDOUS: | No |

**14.6. Special precautions for user**

Land transport (ADR/RID) Special Provisions: 640 D
Tunnel restriction code: (D/E)
Transport as "limited quantity" according to chapter 3.4 ADR/RID / Special Provisions: 640D
Inland waterway craft (ADN) / Special Provisions: 640D

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

not applicable

## 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

| | |
|---|---|
| Directive 2010/75/EU on industrial emissions: | 66,5 % |

**National regulatory information**

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

**Additional information**

Berufsgenossenschaftliche Informationen (DGUV-Informationen): BGI 524 (M 044) Isocyanate
Berufsgenossenschaftliche Informationen (DGUV-Informationen): BGI 621 Solvent

**15.2. Chemical safety assessment**

For this mixture a chemical safety assessment has been carried out.

## SECTION 16: Other information

**Changes**

This data sheet contains changes from the previous version in section(s):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

**Abbreviations and acronyms**

ADN: Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways).
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
ATE: Acute Toxicity Estimate.
AwSV: Anlagenverordnung wassergefährdender Stoffe (Regulation on facilities handling substances dangerous to water).
BGI: Berufsgenossenschaftliche Informationen (trade association information).
BGR: Berufsgenossenschaftliche Regeln (trade association regulation).
CAS: Chemical Abstracts Service.
CEN: Comité Européen de Normalisation European (Committee for Standardization).
CLP: Classification, Labelling and Packaging of substances and mixtures (REGULATION (EC) No 1272/2008).
DIN: Deutsches Institut für Normung (German institute for standardization).
DMEL: Derived Minimum Effect Level.
DNEL: Derived No Effect Level.
EC: European Community.
EC50: Half maximal effective concentration.
ECHA: European Chemicals Agency.

EG: Europäische Gemeinschaft (European Community).
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
EN: European Norms.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
IATA-DGR: International Air Transport Association - Dangerous Goods Regulations.
IBC: Intermediate Bulk Container.
IC50 / ErC50: Inhibitory concentration, 50 %.
ICAO-TI: International Civil Aviation Organization - Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Code for Dangerous Goods.
ISO: International Organization for Standardization.
IUPAC: International Union for Pure and Applied Chemistry.
LC50: Lethal concentration, 50 %.
LD50: Lethal dose, 50 %.
log Kow (Pow): Partition coefficient n-octanol/water.
LQ: Limited Quantities.
MARPOL: International Convention for the Prevention of Marine Pollution from Ships.
OECD: Organisation for Economic Co-operation and Development.
PBT: persistent, bioaccumulative and toxic.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006).
RID: Règlement concernant le transport International ferroviaire de marchandises Dangereuses (Regulation concerning the International Carriage of Dangerous Goods by Rail).
SVHC: Substances of Very High Concern.
STOT - RE: Specific Target Organ Toxicity - Repeated Exposure.
STOT - SE: Specific Target Organ Toxicity - Single Exposure.
TRGS: Technische Regel für Gefahrstoffe (technical guideline for the handling of hazardous materials).
UFI: Unique Formula Identifier.
UN: Untited Nations.
VOC: Volatile organic compounds.
vPvB: very persistent and very bioaccumulative.
WGK: Wassergefährdungsklasse (water hazard class).

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

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |
| EUH014 | Reacts violently with water. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| EUH204 | Contains isocyanates. May produce an allergic reaction. |

**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.

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