# Safety Data Sheet according to (EC) No 1907/2006 as amended



BONDERITE L-GP BND60A ACHESON known as PULVE BND 60A (FEDG) (Aerosol)

SDS No. : 369109
V007.0
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

BONDERITE L-GP BND60A ACHESON known as PULVE BND 60A (FEDG) (Aerosol)
UFI: T38S-XXFD-E20R-MDD4

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

Intended use:
Protective coating for welding

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

Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.

### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification (CLP):**

| | |
|---|---|
| Flammable aerosols | Category 1 |
| H222 Extremely flammable aerosol. | |
| H229 Pressurized container: May burst if heated. | |
| Serious eye irritation | Category 2 |
| H319 Causes serious eye irritation. | |
| Specific target organ toxicity - single exposure | Category 3 |
| H336 May cause drowsiness or dizziness. | |
| Target organ: Central nervous system | |

### 2.2. Label elements

**Label elements (CLP):**

| | |
|---|---|
| **Hazard pictogram:** |  |
| **Contains** | acetone<br><br>Butanone |
| **Signal word:** | Danger |
| **Hazard statement:** | H222 Extremely flammable aerosol.<br>H229 Pressurized container: May burst if heated.<br>H319 Causes serious eye irritation.<br>H336 May cause drowsiness or dizziness. |
| **Supplemental information** | EUH066 Repeated exposure may cause skin dryness or cracking.<br>Contains: maleic anhydride May produce an allergic reaction. |
| **Precautionary statement: Prevention** | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P211 Do not spray on an open flame or other ignition source.<br>P251 Do not pierce or burn, even after use.<br>P261 Avoid breathing mist/vapours.<br>P280 Wear eye protection/face protection. |
| **Precautionary statement: Storage** | P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. |

### 2.3. Other hazards

None if used properly.

**Following substances are present in a concentration ≥ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

None

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS No.<br>EC No<br>REACH-Reg. No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|---|---|---|---|---|
| acetone<br>67-64-1<br>200-662-2<br>01-2119471330-49 | 20- < 40 % | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336 | | EU OEL<br>EUEXPL2D |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8<br>203-448-7<br>01-2119474691-32 | 20- < 40 % | Press. Gas Liquef. Gas, H280<br>Flam. Gas 1A, H220 | | |
| Propane<br>74-98-6<br>200-827-9<br>01-2119486944-21 | 20- < 40 % | Flam. Gas 1A, H220<br>Press. Gas H280 | | |
| Butanone<br>78-93-3<br>201-159-0<br>01-2119457290-43 | 10- < 20 % | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336 | | EU OEL |
| ethyl formate<br>109-94-4<br>203-721-0<br>01-2120115421-74 | 1- < 5 % | Eye Irrit. 2, H319<br>Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Flam. Liq. 2, H225<br>STOT SE 3, H335 | | |
| 1,3-Dioxolane<br>646-06-0<br>211-463-5<br>01-2119490744-29 | 1- < 3 % | Flam. Liq. 2, H225<br>Eye Dam. 1, H318 | | |
| maleic anhydride<br>108-31-6<br>203-571-6<br>01-2119472428-31 | 0,0001- < 0,001 %<br>(1 ppm- < 10 ppm) | STOT RE 1, Inhalation, H372<br>Acute Tox. 4, H302<br>Skin Sens. 1A, H317<br>Resp. Sens. 1, H334<br>Eye Dam. 1, H318<br>Skin Corr. 1B, H314 | Skin Sens. 1A; H317; C >= 0,001 % | |

The product contains synthetic polymer microparticles above the concentration limit, but derogation §4 or §5 apply.
(4a) use at industrial sites

| Generic Polymer Name | Concentration range |
|---|---|
| Amino-resins, phenolic resins and polyurethanes | 0,1-10 % |

**If no ATE values are displayed, please refer to LD/LC50 values in Section 11.**
**For full text of the H - statements and other abbreviations see section 16 "Other information".**

The hazard classification of this product is based solely on the mixture present within the aerosol, excluding the propellant gases. The information provided in Section 3 is based on the combination of the mixture and propellant gases.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation:
Fresh air, oxygen supply, warmth; seek specialist medical attention.

Skin contact:
Immediately wash skin thoroughly with soap and water.

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

In case of adverse health effects seek medical advice.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

**4.2. Most important symptoms and effects, both acute and delayed**
EYE: Irritation, conjunctivitis.

Vapors may cause drowsiness and dizziness.

Repeated exposure may cause skin dryness or cracking.

**4.3. Indication of any immediate medical attention and special treatment needed**
See section: Description of first aid measures

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**
**Suitable extinguishing media:**
Fine water spray
Carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**
Water jet (solvent-containing product).

**5.2. Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in fires.
Cool pressurized can containers with jet of water. Containers may explode.

**5.3. Advice for firefighters**
Wear protective equipment.
Wear self-contained breathing apparatus.

**Additional information:**
Cool endangered containers with water spray jet.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Avoid contact with skin and eyes.
Danger of slipping on spilled product.

**6.2. Environmental precautions**
Do not empty into drains / surface water / ground water.

**6.3. Methods and material for containment and cleaning up**
Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**
See advice in section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Avoid skin and eye contact.
Ensure that workrooms are adequately ventilated.
See advice in section 8
Avoid open flames and sources of ignition.
Ground/bond container and receiving equipment.
Use explosion proof electric equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Take measures to prevent the build-up of electrostatic charges.

Hygiene measures:

Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.

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

Take precautionary measures against static discharges during storage and transport.
Keep container in a well ventilated place.
Storage at 5 to 25°C is recommended.

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

Protective coating for welding

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational Exposure Limits**

Valid for
Germany

| Ingredient [Regulated substance] | ppm | mg/m³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|---|---|---|---|---|
| Acetone<br>67-64-1<br>[ACETONE] | 500 | 1.210 | Time Weighted Average (TWA): | Indicative | ECTLV |
| Acetone<br>67-64-1 | 500 | 1.200 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Acetone<br>67-64-1 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |
| Butane<br>106-97-8 | 1.000 | 2.400 | Exposure limit(s): | 4 | TRGS 900 |
| Butane<br>106-97-8 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Propane<br>74-98-6 | 1.000 | 1.800 | Exposure limit(s): | 4 | TRGS 900 |
| Propane<br>74-98-6 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| Butanone<br>78-93-3<br>[BUTANONE] | 200 | 600 | Time Weighted Average (TWA): | Indicative | ECTLV |
| Butanone<br>78-93-3<br>[BUTANONE] | 300 | 900 | Short Term Exposure Limit (STEL): | Indicative | ECTLV |
| Butanone<br>78-93-3 | | | Skin designation: | Can be absorbed through the skin. | TRGS 900 |
| Butanone<br>78-93-3 | 200 | 600 | Exposure limit(s): | 1<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Butanone<br>78-93-3 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |
| Ethyl formate<br>109-94-4 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |
| Ethyl formate<br>109-94-4 | | | Skin designation: | Can be absorbed through the skin. | TRGS 900 |
| Ethyl formate<br>109-94-4 | 100 | 310 | Exposure limit(s): | 1<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| 1,3-Dioxolane<br>646-06-0 | | | Skin designation: | Can be absorbed through the skin. | TRGS 900 |
| 1,3-Dioxolane<br>646-06-0 | | | Short Term Exposure Classification: | Category II: substances with a resorptive effect. | TRGS 900 |
| 1,3-Dioxolane<br>646-06-0 | 50 | 150 | Exposure limit(s): | 2<br>Even if the AGW and BGW | TRGS 900 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | values are complied with, there still may be a risk of reproductive damage (see Number 2.7). | |
| Maleic anhydride<br>108-31-6 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |
| Maleic anhydride<br>108-31-6 | | | STEL (Short Term Exposure Limit) factor: | 1<br>Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values. | TRGS 900 |
| Maleic anhydride<br>108-31-6 | 0,02 | 0,081 | Exposure limit(s): | 2.5<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |

**Predicted No-Effect Concentration (PNEC):**

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|---|---|---|---|---|---|---|
| | | | mg/l | ppm | mg/kg | others | |
| acetone 67-64-1 | aqua (intermittent releases) | | 21 mg/l | | | | |
| acetone 67-64-1 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| acetone 67-64-1 | sediment (freshwater) | | | | 30,4 mg/kg | | |
| acetone 67-64-1 | sediment (marine water) | | | | 3,04 mg/kg | | |
| acetone 67-64-1 | Soil | | | | 29,5 mg/kg | | |
| acetone 67-64-1 | aqua (freshwater) | | 10,6 mg/l | | | | |
| acetone 67-64-1 | aqua (marine water) | | 1,06 mg/l | | | | |
| Butanone 78-93-3 | aqua (freshwater) | | 55,8 mg/l | | | | |
| Butanone 78-93-3 | aqua (marine water) | | 55,8 mg/l | | | | |
| Butanone 78-93-3 | aqua (intermittent releases) | | 55,8 mg/l | | | | |
| Butanone 78-93-3 | sewage treatment plant (STP) | | 709 mg/l | | | | |
| Butanone 78-93-3 | sediment (freshwater) | | | | 284,74 mg/kg | | |
| Butanone 78-93-3 | sediment (marine water) | | | | 284,7 mg/kg | | |
| Butanone 78-93-3 | Soil | | | | 22,5 mg/kg | | |
| Butanone 78-93-3 | oral | | | | 1000 mg/kg | | |
| ethyl formate 109-94-4 | aqua (freshwater) | | 0,184 mg/l | | | | |
| ethyl formate 109-94-4 | aqua (marine water) | | 0,018 mg/l | | | | |
| ethyl formate 109-94-4 | aqua (intermittent releases) | | 1,837 mg/l | | | | |
| ethyl formate 109-94-4 | sediment (freshwater) | | | | 0,51 mg/kg | | |
| ethyl formate 109-94-4 | sediment (marine water) | | | | 0,051 mg/kg | | |
| ethyl formate 109-94-4 | Soil | | | | 0,207 mg/kg | | |
| ethyl formate 109-94-4 | sewage treatment plant (STP) | | 46,003 mg/l | | | | |
| 1,3-Dioxolane 646-06-0 | aqua (freshwater) | | 19,7 mg/l | | | | |
| 1,3-Dioxolane 646-06-0 | aqua (intermittent releases) | | 0,95 mg/l | | | | |
| 1,3-Dioxolane 646-06-0 | aqua (marine water) | | 1,97 mg/l | | | | |
| 1,3-Dioxolane 646-06-0 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| 1,3-Dioxolane 646-06-0 | sediment (freshwater) | | | | 77,7 mg/kg | | |
| 1,3-Dioxolane 646-06-0 | sediment (marine water) | | | | 7,77 mg/kg | | |
| 1,3-Dioxolane 646-06-0 | Soil | | | | 2,62 mg/kg | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| maleic anhydride 108-31-6 | aqua (freshwater) | | 0,038 mg/l | | | | |
| maleic anhydride 108-31-6 | aqua (marine water) | | 0,004 mg/l | | | | |
| maleic anhydride 108-31-6 | Soil | | | | 0,037 mg/kg | | |
| maleic anhydride 108-31-6 | sediment (freshwater) | | | | 0,296 mg/kg | | |
| maleic anhydride 108-31-6 | sediment (marine water) | | | | 0,03 mg/kg | | |
| maleic anhydride 108-31-6 | sewage treatment plant (STP) | | 44,6 mg/l | | | | |
| maleic anhydride 108-31-6 | Freshwater - intermittent | | 0,379 mg/l | | | | |
| maleic anhydride 108-31-6 | Marine water - intermittent | | 0,038 mg/l | | | | |

**Derived No-Effect Level (DNEL):**

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|---|---|---|---|---|---|
| acetone<br>67-64-1 | Workers | Inhalation | Acute/short term exposure - local effects | | 2420 mg/m3 | |
| acetone<br>67-64-1 | Workers | dermal | Long term exposure - systemic effects | | 186 mg/kg | |
| acetone<br>67-64-1 | Workers | Inhalation | Long term exposure - systemic effects | | 1210 mg/m3 | |
| acetone<br>67-64-1 | General population | dermal | Long term exposure - systemic effects | | 62 mg/kg | |
| acetone<br>67-64-1 | General population | Inhalation | Long term exposure - systemic effects | | 200 mg/m3 | |
| acetone<br>67-64-1 | General population | oral | Long term exposure - systemic effects | | 62 mg/kg | |
| Butanone<br>78-93-3 | Workers | dermal | Long term exposure - systemic effects | | 1161 mg/kg | |
| Butanone<br>78-93-3 | Workers | inhalation | Long term exposure - systemic effects | | 600 mg/m3 | |
| Butanone<br>78-93-3 | General population | dermal | Long term exposure - systemic effects | | 412 mg/kg | |
| Butanone<br>78-93-3 | General population | inhalation | Long term exposure - systemic effects | | 106 mg/m3 | |
| Butanone<br>78-93-3 | General population | oral | Long term exposure - systemic effects | | 31 mg/kg | |
| ethyl formate<br>109-94-4 | Workers | inhalation | Acute/short term exposure - systemic effects | | 157,5 mg/m3 | |
| ethyl formate<br>109-94-4 | Workers | inhalation | Long term exposure - systemic effects | | 52,508 mg/m3 | |
| ethyl formate<br>109-94-4 | Workers | dermal | Acute/short term exposure - systemic effects | | 11,25 mg/kg | |
| ethyl formate<br>109-94-4 | Workers | dermal | Long term exposure - systemic effects | | 3,75 mg/kg | |
| ethyl formate<br>109-94-4 | General population | inhalation | Acute/short term exposure - systemic effects | | 18,75 mg/m3 | |
| ethyl formate<br>109-94-4 | General population | inhalation | Long term exposure - systemic effects | | 6,252 mg/m3 | |
| ethyl formate<br>109-94-4 | General population | oral | Acute/short term exposure - systemic effects | | 15 mg/kg | |
| ethyl formate<br>109-94-4 | General population | oral | Long term exposure - systemic effects | | 5 mg/kg | |
| ethyl formate<br>109-94-4 | General population | dermal | Acute/short term exposure - systemic effects | | 1,338 mg/kg | |
| ethyl formate<br>109-94-4 | General population | dermal | Long term exposure - systemic effects | | 0,466 mg/kg | |
| 1,3-Dioxolane<br>646-06-0 | Workers | inhalation | Long term exposure - systemic effects | | 3,26 mg/m3 | |
| 1,3-Dioxolane<br>646-06-0 | Workers | dermal | Long term exposure - | | 0,93 mg/kg | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | systemic effects | | | |
| 1,3-Dioxolane<br>646-06-0 | General population | inhalation | Long term exposure - systemic effects | | 1,48 mg/m3 | |
| 1,3-Dioxolane<br>646-06-0 | General population | oral | Long term exposure - systemic effects | | 0,33 mg/kg | |
| 1,3-Dioxolane<br>646-06-0 | General population | dermal | Long term exposure - systemic effects | | 0,33 mg/kg | |
| maleic anhydride<br>108-31-6 | Workers | inhalation | Acute/short term exposure - systemic effects | | 0,2 mg/m3 | |
| maleic anhydride<br>108-31-6 | Workers | inhalation | Acute/short term exposure - local effects | | 0,2 mg/m3 | |
| maleic anhydride<br>108-31-6 | Workers | inhalation | Long term exposure - systemic effects | | 0,081 mg/m3 | |
| maleic anhydride<br>108-31-6 | Workers | inhalation | Long term exposure - local effects | | 0,081 mg/m3 | |
| maleic anhydride<br>108-31-6 | Workers | dermal | Acute/short term exposure - systemic effects | | | |
| maleic anhydride<br>108-31-6 | Workers | dermal | Acute/short term exposure - local effects | | | |
| maleic anhydride<br>108-31-6 | Workers | dermal | Long term exposure - systemic effects | | | |
| maleic anhydride<br>108-31-6 | Workers | dermal | Long term exposure - local effects | | | |

**Biological Exposure Indices:**

| Ingredient [Regulated substance] | Parameters | Biological specimen | Sampling time | Conc. | Basis of biol. exposure index | Remark | Additional Information |
|---|---|---|---|---|---|---|---|
| Acetone<br>67-64-1<br>[Acetone] | acetone | Urine | Sampling time: End of shift. | 50 mg/l | DE BGW | | |
| Butanone<br>78-93-3<br>[2-Butanone; Methylethylketone] | 2-butanone | Urine | Sampling time: End of shift. | 2 mg/l | DE BGW | | |

**8.2. Exposure controls:**

Engineering controls:
Ensure good ventilation/suction at the workplace.

Respiratory protection:
In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).
This recommendation should be matched to local conditions.

Hand protection:
Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR; >= 0.7 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR; >= 0.7 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Protective goggles
Protective eye equipment should conform to EN166.

Skin protection:
Suitable protective clothing
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| Delivery form | aerosol |
| Colour | Off white |
| Odor | Acetone |
| Physical state | liquid |
| Melting point | Not applicable, Product is a liquid |
| Solidification temperature | < -187 °C (< -304.6 °F) |
| Initial boiling point | < -42 °C (< -43.6 °F) |
| Flammability | Extremely flammable |
| Explosive limits | |
| lower | 1,5 %(V); |
| upper | 8,5 %(V); |
| | Upper/lower explosion limit |
| Flash point | < -104 °C (< -155.2 °F) Solvent Mixtures |
| Auto-ignition temperature | > 200 °C (> 392 °F) |
| Decomposition temperature | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH | Not applicable, Product is non-soluble (in water). |
| Viscosity (kinematic)<br>(40 °C (104 °F); ) | < 20,5 mm2/s |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water) | Soluble |
| Partition coefficient: n-octanol/water | Not applicable<br>Mixture |
| Vapour pressure<br>(55 °C (131 °F)) | 961 mbar;no method / method unknown |
| Vapour pressure<br>(20 °C (68 °F)) | > 4000 hPa |
| Vapour pressure<br>(50 °C (122 °F)) | > 8000 hPa |
| Density<br>(20 °C (68 °F)) | 0,8 g/cm3 no method / method unknown |
| Relative vapour density:<br>(20 °C) | > 1 |
| Particle characteristics | Not applicable<br>Product is a liquid |

**9.2. Other information**

**9.2.1. Information with regard to physical hazard classes**

| | |
|---|---|
| Aerosols: | Classified as Aerosol category 1 because it contains more than 1 % (by mass) flammable components or has a heat of combustion of at least 20 kJ/g and is not submitted to the flammability classification procedures |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
None if used for intended purpose.

**10.2. Chemical stability**
Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**
See section reactivity

**10.4. Conditions to avoid**
No decomposition if used according to specifications.

**10.5. Incompatible materials**
None if used properly.

**10.6. Hazardous decomposition products**
None if used for intended purpose.
In case of fire toxic gases can be released.

## SECTION 11: Toxicological information

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

**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| acetone<br>67-64-1 | LD50 | 5.800 mg/kg | rat | not specified |
| Butanone<br>78-93-3 | LD50 | 2.193 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| ethyl formate<br>109-94-4 | LD50 | 1.850 mg/kg | rat | not specified |
| 1,3-Dioxolane<br>646-06-0 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| maleic anhydride<br>108-31-6 | LD50 | 1.090 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| acetone<br>67-64-1 | LD50 | > 15.688 mg/kg | rabbit | Draize Test |
| Butanone<br>78-93-3 | LD50 | > 6.400 mg/kg | rabbit | not specified |
| 1,3-Dioxolane<br>646-06-0 | LD50 | > 2.000 mg/kg | rabbit | not specified |
| maleic anhydride<br>108-31-6 | LD50 | 2.620 mg/kg | rabbit | not specified |

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| acetone<br>67-64-1 | LC50 | 76 mg/l | vapour | 4 h | rat | not specified |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | LC50 | 274200 ppm | gas | 4 h | rat | not specified |
| Propane<br>74-98-6 | LC50 | > 800000 ppm | gas | 15 min | rat | not specified |
| Butanone<br>78-93-3 | LC50 | 34,5 mg/l | vapour | 4 h | rat | not specified |
| 1,3-Dioxolane<br>646-06-0 | LC50 | 68,4 mg/l | vapour | 4 h | rat | equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity) |

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| acetone<br>67-64-1 | not irritating | | guinea pig | not specified |
| Butanone<br>78-93-3 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 1,3-Dioxolane<br>646-06-0 | not irritating | 24 h | rabbit | not specified |
| 1,3-Dioxolane<br>646-06-0 | not irritating | | Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE) | OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method) |
| maleic anhydride<br>108-31-6 | highly irritating | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| acetone<br>67-64-1 | irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Butanone<br>78-93-3 | irritating | | rabbit | equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 1,3-Dioxolane<br>646-06-0 | Category 1 (irreversible effects on the eye) | | Bovine, cornea, in vitro test | OECD Guideline 437 (BCOP) |
| maleic anhydride<br>108-31-6 | corrosive | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| acetone<br>67-64-1 | not sensitising | Guinea pig maximisation test | guinea pig | not specified |
| Butanone<br>78-93-3 | not sensitising | Buehler test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| maleic anhydride<br>108-31-6 | sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Result | Type of study /<br>Route of administration | Metabolic activation /<br>Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| acetone<br>67-64-1 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| acetone<br>67-64-1 | negative | mammalian cell gene mutation assay | without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Propane<br>74-98-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Propane<br>74-98-6 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Butanone<br>78-93-3 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Butanone<br>78-93-3 | negative | in vitro mammalian chromosome aberration test | not applicable | | equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Butanone<br>78-93-3 | negative | mammalian cell gene mutation assay | with and without | | equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| maleic anhydride<br>108-31-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| acetone<br>67-64-1 | negative | oral: drinking water | | mouse | not specified |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | negative | inhalation: gas | | rat | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Propane<br>74-98-6 | negative | | | Drosophila melanogaster | not specified |
| Propane<br>74-98-6 | negative | inhalation: gas | | rat | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Butanone<br>78-93-3 | negative | intraperitoneal | | mouse | equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| maleic anhydride<br>108-31-6 | negative | inhalation | | rat | OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) |

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

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

| Hazardous components<br>CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Sex | Method |
|---|---|---|---|---|---|---|
| acetone<br>67-64-1 | not carcinogenic | dermal | 424 d<br>3 times per week | mouse | female | not specified |

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|---|---|---|---|---|
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | NOAEL P 21,4 mg/l<br><br>NOAEL F1 21,4 mg/l | screening | inhalation: gas | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Propane<br>74-98-6 | NOAEL P 21,6 mg/l<br><br>NOAEL F1 21,6 mg/l | screening | inhalation: gas | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Butanone<br>78-93-3 | NOAEL P 10.000 mg/l<br><br>NOAEL F1 10.000 mg/l | two-generation study | oral: drinking water | rat | equivalent or similar to OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |
| maleic anhydride<br>108-31-6 | NOAEL P 55 mg/kg<br><br>NOAEL F1 55 mg/kg | Two generation study | oral: gavage | rat | OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |

**STOT-single exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Assessment | Route of exposure | Target Organs | Remarks |
|---|---|---|---|---|
| acetone<br>67-64-1 | May cause drowsiness or dizziness. | | | |
| Butanone<br>78-93-3 | May cause drowsiness or dizziness. | | | |
| ethyl formate<br>109-94-4 | May cause respiratory irritation. | | | |

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

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

| Hazardous substances<br>CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | NOAEL 900 mg/kg | oral: drinking water | 90 d | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | | inhalation: gas | 28 d<br>6 h/d | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Propane<br>74-98-6 | | inhalation: gas | 28 d<br>6 h/d, 7 d/w | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Butanone<br>78-93-3 | NOAEL 2500 ppm | inhalation | 90 d | rat | not specified |
| maleic anhydride<br>108-31-6 | NOAEL 40 mg/kg | oral: feed | 90 d | rat | not specified |

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

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

| Hazardous substances<br>CAS-No. | Viscosity (kinematic)<br>Value | Temperature | Method | Remarks |
|---|---|---|---|---|
| Butanone<br>78-93-3 | 0,51 mm2/s | 20 °C | ASTM Standard D7042 | |

**11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties**

No data available.

## SECTION 12: Ecological information

**General ecological information:**

Do not empty into drains / surface water / ground water.

### 12.1. Toxicity

**Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | LC50 | 8.120 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | LC50 | 27,98 mg/l | 96 h | | QSAR (Quantitative Structure Activity Relationship) |
| Butanone<br>78-93-3 | LC50 | 3.220 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1,3-Dioxolane<br>646-06-0 | LC50 | > 95,4 mg/l | 96 h | Lepomis macrochirus | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| maleic anhydride<br>108-31-6 | LC50 | 75 mg/l | 96 h | Lepomis macrochirus | OECD Guideline 203 (Fish, Acute Toxicity Test) |

**Toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | EC50 | 8.800 mg/l | 48 h | Daphnia pulex | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | EC50 | 14,22 mg/l | 48 h | | QSAR (Quantitative Structure Activity Relationship) |
| Butanone<br>78-93-3 | EC50 | 5.091 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| ethyl formate<br>109-94-4 | EC50 | 120 mg/l | 24 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 1,3-Dioxolane<br>646-06-0 | EC50 | > 772 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| maleic anhydride<br>108-31-6 | EC50 | 77 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

**Chronic toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | NOEC | 2.212 mg/l | 28 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | NOEC | 530 mg/l | 8 d | Microcystis aeruginosa | DIN 38412-09 |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | EC50 | 7,71 mg/l | 96 h | | QSAR (Quantitative Structure Activity Relationship) |
| Butanone<br>78-93-3 | EC50 | 1.240 mg/l | 96 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Butanone<br>78-93-3 | EC10 | 1.010 mg/l | 96 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,3-Dioxolane<br>646-06-0 | NOEC | 877 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,3-Dioxolane<br>646-06-0 | EC50 | > 877 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| maleic anhydride<br>108-31-6 | EC50 | 29 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| maleic anhydride<br>108-31-6 | EC10 | 23 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |

**Toxicity (microorganisms):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | EC10 | 1.000 mg/l | 30 min | Pseudomonas putida | DIN 38412, part 27 (Bacterial oxygen consumption test) |
| Butanone<br>78-93-3 | EC50 | 1.150 mg/l | 16 h | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test) |
| 1,3-Dioxolane<br>646-06-0 | EC50 | > 100 mg/l | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| maleic anhydride<br>108-31-6 | EC10 | 44,6 mg/l | | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test) |

**12.2. Persistence and degradability**

**Biodegradability (Screening Tests):**
The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|---|---|---|---|---|
| acetone<br>67-64-1 | readily biodegradable | aerobic | 81 - 92 % | 30 d | EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | readily biodegradable | aerobic | > 60 % | 28 d | OECD 301 A - F |
| Propane<br>74-98-6 | readily biodegradable | aerobic | > 60 % | 28 d | OECD 301 A - F |
| Butanone<br>78-93-3 | readily biodegradable | aerobic | 98 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| ethyl formate<br>109-94-4 | readily biodegradable | | 77,48 % | 28 day | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| 1,3-Dioxolane<br>646-06-0 | not readily biodegradable. | aerobic | 3,7 % | 35 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| maleic anhydride<br>108-31-6 | readily biodegradable | aerobic | 98 % | 7 d | OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test) |

**(Bio)degradability (Simulation Tests):**
No data available.

### 12.3. Bioaccumulative potential

**Partition Coefficient (octanol/water)**
The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | LogPow | Temperature | Method |
|---|---|---|---|
| acetone<br>67-64-1 | -0,24 | | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Butane, n- (< 0.1 % butadiene)<br>106-97-8 | 2,31 | 20 °C | other (measured) |
| Butanone<br>78-93-3 | 0,3 | 40 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| ethyl formate<br>109-94-4 | 0,23 | | not specified |
| 1,3-Dioxolane<br>646-06-0 | -0,35 | 20 °C | QSAR (Quantitative Structure Activity Relationship) |
| maleic anhydride<br>108-31-6 | -2,61 | 19,8 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

**Bioconcentration factor (BCF)**
No data available.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT / vPvB / PMT / vPvM assessment

**PBT/vPvB**
This mixture does not contain any substances that are assessed to be a PBT or vPvB.
Based on available data, the classification criteria are not met.

**PMT/vPvM**
This mixture does not contain any substances that are assessed to be a PMT or vPvM.
Based on available data, the classification criteria are not met.

### 12.6. Endocrine disrupting properties

No data available.

**12.7. Other adverse effects**

The product contains organic solvents which are insoluble in water. According to the requirements of the ATV regulations for the dis charge of wastewater from commercial and industrial plant, organic solvents which are immiscible with water can only be dis charged to an extent which corresponds to their solubility in water. The local discharge regulations take precedence.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Product disposal:
In consultation with the responsible local authority, must be subjected to special treatment.

Do not spill substance/product and prevent environmental releases.
Do not rinse packaging before disposal.

Waste code

080111

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

## SECTION 14: Transport information

**14.1. UN number or ID number**

| | |
|---|---|
| ADR | 1950 |
| RID | 1950 |
| ADN | 1950 |
| IMDG | 1950 |
| IATA | 1950 |

**14.2. UN proper shipping name**

| | |
|---|---|
| ADR | AEROSOLS |
| RID | AEROSOLS |
| ADN | AEROSOLS |
| IMDG | AEROSOLS |
| IATA | Aerosols, flammable |

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

| | |
|---|---|
| ADR | 2.1 |
| RID | 2.1 |
| ADN | 2.1 |
| IMDG | 2.1 |
| IATA | 2.1 |

**14.4. Packing group**

| | |
|---|---|
| ADR | |
| RID | |
| ADN | |
| IMDG | |
| IATA | |

**14.5. Environmental hazards**

| | |
|---|---|
| ADR | not applicable |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

**14.6. Special precautions for user**

| | |
|---|---|
| ADR | not applicable<br>Tunnelcode: (D) |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

**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**

| | |
|---|---|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 2024/590): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021): | Not applicable |

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council

| | |
|---|---|
| VOC content (2010/75/EU) | 92,7 % |
| Seveso III (2012/18/EU): | P3a, Flammable aerosols |

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-affairs/what-we-do/policies/counter-terrorism/protection/implementation-explosives-precursors-legislation_en.

**National regulations/information (Germany):**

| | |
|---|---|
| WGK: | WGK 1: slightly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV) )<br>Classification according to AwSV, Annex 1 (5.2) |
| Storage class according to TRGS 510: | 2B |

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
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.
H372 Causes damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms:

ADG(-Code): Australian Dangerous Goods (Code)
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM: American Society for Testing and Materials
ATE: acute toxicity estimate
AS: Australian Standard
AwSV: Ordinance on Installations for the Handling of Substances Hazardous to Water
CAS: Chemical Abstract Service
CLP: Regulation (EC) No 1272/2008
CMR: cancerogenic, mutagenic or reprotoxic
DIN: German Institute for Standardization
ECx: Effective concentration (x% effective level)
ECHA: European Chemicals Agency
EC-Nummer: Substance number in the EU-inventories EINECS/ELINCS
ECTLV: European community threshold limit value
ED:Substance identified as having endocrine disrupting properties
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
EN : European Standard
ENCS: Japanese chemical inventory
EPA: US Environmental Protection Agency
EU: European Union
EU EXPLD1: Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD2: Substance listed in Annex II, Reg (EC) No. 2019/1148
EWC: European Waste Catalogue
GHS: Globally Harmonised System for Classification and Labelling of Chemicals
GLP: Good Laboratory Practice
HSNO: Hazardous Substances and New Organisms
IARC: International Agency for Research of Cancer
IATA: International Air Transport Association
IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization
IMDG-Code: International Maritime Code for Dangerous Goods
IMO: International Maritime Organization
ISO: International Standardization Organisation
LC50: Median lethal concentration
LD50: Median lethal dose
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
n.o.s.: not otherwise specified
NO(A)EC: No (adverse) effect concentration
NO(A)EL: No (adverse) effect level
NZS: New Zealand Standard
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit

OPPT: US EPA Office of Pollution Prevention and Toxics
OPPTS: US EPA Office of Prevention, Pesticides and Toxic Substances
PBT: Persistent, bioaccumulative, toxic
PMT: Persistent, mobile and toxic
(Q)SAR: (Quantitative) structure–activity relationship
REACH: Regulation (EC) No. 1907/2006
RID: Regulations concerning the International Transport of Dangerous Goods by Rail
SADT: Self Accelerating Decomposition Temperature
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
STOT SE: Specific Target Organ Toxicity - single exposure
STOT RE: Specific Target Organ Toxicity - repeated exposure
SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
SVHC: Substance of very high concern (REACH Candidate List)
TRGS: German Technical Rules for hazardous substances
UN: United Nations
VOC: Volatile Organic Compound
814.018 VOC Reg CH: Swiss Ordinance 814.018 on the Incentive Tax on Volatile Organic Compounds
vPvB: Very persistent, very bioaccumulative
vPvM: Very persistent and very mobile
VwVwS: Administrative Regulation on Substances Hazardous to Waters
WGK: Water hazard class

**Further information:**

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