



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

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BONDERITE L-GP 154 ACHESON known as DAG 154

SDS No. : 325962  
V001.7

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

#### 1.1. Product identifier

BONDERITE L-GP 154 ACHESON known as DAG 154  
UFI: FWVM-KWNS-S202-RP4D

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

Intended use:  
Lubricant

#### 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

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For Safety Data Sheet updates please visit our website [www.mysds.henkel.com](http://www.mysds.henkel.com) or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

SDSinfo.Adhesive@henkel.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 liquids                                | Category 2 |
| H225 Highly flammable liquid and vapour.         |            |
| Serious eye damage                               | Category 1 |
| H318 Causes serious eye damage.                  |            |
| 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**

Propan-2-ol

butan-1-ol

**Signal word:**

Danger

**Hazard statement:**

H225 Highly flammable liquid and vapour.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

**Precautionary statement:  
Prevention**

P210 Keep away from heat/open flames/hot surfaces. - No smoking.

P260 Do not breathe mist/vapours.

P280 Wear eye protection/face protection.

**Precautionary statement:  
Response**

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 or doctor.

P370+P378 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**2.3. Other hazards**

None if used properly.

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

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

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

**3.2. Mixtures**

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

| <b>Hazardous components<br/>CAS-No.<br/>EC Number<br/>REACH-Reg No.</b> | <b>Concentration</b> | <b>Classification</b>                                                                                                           | <b>Specific Conc. Limits, M-<br/>factors and ATEs</b> | <b>Add.<br/>Information</b> |
|-------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------|
| Propan-2-ol<br>67-63-0<br>200-661-7<br>01-2119457558-25                 | 60- 80 %             | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336                                                                     |                                                       |                             |
| butan-1-ol<br>71-36-3<br>200-751-6<br>01-2119484630-38                  | 1- < 5 %             | Flam. Liq. 3, H226<br>Acute Tox. 4, Oral, H302<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H336 |                                                       |                             |
| 1-methoxy-2-propanol<br>107-98-2<br>203-539-1<br>01-2119457435-35       | 1- < 5 %             | Flam. Liq. 3, H226<br>STOT SE 3, H336                                                                                           |                                                       | EU OEL                      |

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".

**SECTION 4: First aid measures****4.1. Description of first aid measures**

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap.

In case of adverse health effects seek medical advice.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

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.

**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:**

Carbon dioxide, foam, powder

Fine water spray

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

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

Formation of toxic gases is possible during heating or in fires.

**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

**General information:**

Danger of slipping on spilled product.

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

Avoid skin and eye contact.

Remove sources of ignition.

**6.2. Environmental precautions**

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

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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**

Ensure that workrooms are adequately ventilated.

Avoid skin and eye contact.

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.

**Hygiene measures:**

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

The workplace should be equipped with an emergency shower and eye-rinsing facility.

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

Storage at 10 to 30°C is recommended.

Store in a cool, well-ventilated place.

Do not store together with oxidants.

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

Lubricant

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational Exposure Limits**Valid for  
Germany

| Ingredient [Regulated substance]                          | ppm | mg/m <sup>3</sup> | Value type                          | Short term exposure limit category / Remarks                                                                                                   | Regulatory list |
|-----------------------------------------------------------|-----|-------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Propan-2-ol<br>67-63-0                                    |     |                   | Short Term Exposure Classification: | Category II: substances with a resorptive effect.                                                                                              | TRGS 900        |
| Propan-2-ol<br>67-63-0                                    | 200 | 500               | 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        |
| Graphite<br>7782-42-5                                     |     | 10                | 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        |
| Graphite<br>7782-42-5                                     |     | 1,25              | Exposure limit(s):                  | If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).                                  | TRGS 900        |
| Graphite<br>7782-42-5                                     |     |                   | Short Term Exposure Classification: | Category II: substances with a resorptive effect.                                                                                              | TRGS 900        |
| Butan-1-ol<br>71-36-3                                     |     |                   | 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        |
| Butan-1-ol<br>71-36-3                                     | 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-Methoxypropan-2-ol<br>107-98-2<br>[1-METHOXYPROPANOL-2] | 100 | 375               | Time Weighted Average (TWA):        | Indicative                                                                                                                                     | ECTLV           |
| 1-Methoxypropan-2-ol<br>107-98-2<br>[1-METHOXYPROPANOL-2] | 150 | 568               | Short Term Exposure Limit (STEL):   | Indicative                                                                                                                                     | ECTLV           |
| 1-Methoxypropan-2-ol<br>107-98-2                          | 100 | 370               | 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        |
| 1-Methoxypropan-2-ol<br>107-98-2                          |     |                   | 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        |

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

| Name on list                     | Environmental<br>Compartment       | Exposure<br>period | Value          |     |                |        | Remarks                             |
|----------------------------------|------------------------------------|--------------------|----------------|-----|----------------|--------|-------------------------------------|
|                                  |                                    |                    | mg/l           | ppm | mg/kg          | others |                                     |
| Propan-2-ol<br>67-63-0           | aqua<br>(freshwater)               |                    | 140,9 mg/l     |     |                |        |                                     |
| Propan-2-ol<br>67-63-0           | aqua (marine<br>water)             |                    | 140,9 mg/l     |     |                |        |                                     |
| Propan-2-ol<br>67-63-0           | sediment<br>(freshwater)           |                    |                |     | 552 mg/kg      |        |                                     |
| Propan-2-ol<br>67-63-0           | sediment<br>(marine water)         |                    |                |     | 552 mg/kg      |        |                                     |
| Propan-2-ol<br>67-63-0           | Soil                               |                    |                |     | 28 mg/kg       |        |                                     |
| Propan-2-ol<br>67-63-0           | aqua<br>(intermittent<br>releases) |                    | 140,9 mg/l     |     |                |        |                                     |
| Propan-2-ol<br>67-63-0           | sewage<br>treatment plant<br>(STP) |                    | 2251 mg/l      |     |                |        |                                     |
| Propan-2-ol<br>67-63-0           | oral                               |                    |                |     | 160 mg/kg      |        |                                     |
| butan-1-ol<br>71-36-3            | aqua<br>(freshwater)               |                    | 0,082 mg/l     |     |                |        |                                     |
| butan-1-ol<br>71-36-3            | aqua (marine<br>water)             |                    | 0,0082<br>mg/l |     |                |        |                                     |
| butan-1-ol<br>71-36-3            | aqua<br>(intermittent<br>releases) |                    | 2,25 mg/l      |     |                |        |                                     |
| butan-1-ol<br>71-36-3            | sewage<br>treatment plant<br>(STP) |                    | 2476 mg/l      |     |                |        |                                     |
| butan-1-ol<br>71-36-3            | sediment<br>(freshwater)           |                    |                |     | 0,324<br>mg/kg |        |                                     |
| butan-1-ol<br>71-36-3            | sediment<br>(marine water)         |                    |                |     | 0,032<br>mg/kg |        |                                     |
| butan-1-ol<br>71-36-3            | Soil                               |                    |                |     | 0,017<br>mg/kg |        |                                     |
| butan-1-ol<br>71-36-3            | Air                                |                    |                |     |                |        | no hazard identified                |
| butan-1-ol<br>71-36-3            | oral                               |                    |                |     |                |        | no potential for<br>bioaccumulation |
| 1-methoxy-2-propanol<br>107-98-2 | aqua<br>(freshwater)               |                    | 10 mg/l        |     |                |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | aqua (marine<br>water)             |                    | 1 mg/l         |     |                |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | Freshwater -<br>intermittent       |                    | 100 mg/l       |     |                |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | sediment<br>(freshwater)           |                    |                |     | 52,3 mg/kg     |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | sediment<br>(marine water)         |                    |                |     | 5,2 mg/kg      |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | Soil                               |                    |                |     | 4,59 mg/kg     |        |                                     |
| 1-methoxy-2-propanol<br>107-98-2 | sewage<br>treatment plant<br>(STP) |                    | 100 mg/l       |     |                |        |                                     |

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

| Name on list                     | Application Area   | Route of Exposure | Health Effect                                | Exposure Time | Value        | Remarks              |
|----------------------------------|--------------------|-------------------|----------------------------------------------|---------------|--------------|----------------------|
| Propan-2-ol<br>67-63-0           | Workers            | dermal            | Long term exposure - systemic effects        |               | 888 mg/kg    |                      |
| Propan-2-ol<br>67-63-0           | Workers            | inhalation        | Long term exposure - systemic effects        |               | 500 mg/m3    |                      |
| Propan-2-ol<br>67-63-0           | General population | dermal            | Long term exposure - systemic effects        |               | 319 mg/kg    |                      |
| Propan-2-ol<br>67-63-0           | General population | inhalation        | Long term exposure - systemic effects        |               | 89 mg/m3     |                      |
| Propan-2-ol<br>67-63-0           | General population | oral              | Long term exposure - systemic effects        |               | 26 mg/kg     |                      |
| butan-1-ol<br>71-36-3            | Workers            | Inhalation        | Long term exposure - local effects           |               | 310 mg/m3    | no hazard identified |
| butan-1-ol<br>71-36-3            | General population | dermal            | Long term exposure - systemic effects        |               | 3,125 mg/kg  | no hazard identified |
| butan-1-ol<br>71-36-3            | General population | Inhalation        | Long term exposure - systemic effects        |               | 55,357 mg/m3 | no hazard identified |
| butan-1-ol<br>71-36-3            | General population | inhalation        | Long term exposure - local effects           |               | 155 mg/m3    | no hazard identified |
| butan-1-ol<br>71-36-3            | General population | oral              | Long term exposure - systemic effects        |               | 1,562 mg/kg  | no hazard identified |
| 1-methoxy-2-propanol<br>107-98-2 | Workers            | Inhalation        | Acute/short term exposure - local effects    |               | 553,5 mg/m3  |                      |
| 1-methoxy-2-propanol<br>107-98-2 | Workers            | dermal            | Long term exposure - systemic effects        |               | 183 mg/kg    |                      |
| 1-methoxy-2-propanol<br>107-98-2 | Workers            | Inhalation        | Long term exposure - systemic effects        |               | 369 mg/m3    |                      |
| 1-methoxy-2-propanol<br>107-98-2 | General population | dermal            | Long term exposure - systemic effects        |               | 78 mg/kg     |                      |
| 1-methoxy-2-propanol<br>107-98-2 | General population | Inhalation        | Long term exposure - systemic effects        |               | 43,9 mg/m3   |                      |
| 1-methoxy-2-propanol<br>107-98-2 | General population | oral              | Long term exposure - systemic effects        |               | 33 mg/kg     |                      |
| 1-methoxy-2-propanol<br>107-98-2 | Workers            | inhalation        | Acute/short term exposure - systemic effects |               | 553,5 mg/m3  |                      |

**Biological Exposure Indices:**

| Ingredient [Regulated substance]                                              | Parameters                  | Biological specimen | Sampling time                         | Conc.   | Basis of biol. exposure index | Remark | Additional Information |
|-------------------------------------------------------------------------------|-----------------------------|---------------------|---------------------------------------|---------|-------------------------------|--------|------------------------|
| Propan-2-ol<br>67-63-0                                                        | acetone                     | Blood               | Sampling time: End of shift.          | 25 mg/l | DE BGW                        |        |                        |
| Propan-2-ol<br>67-63-0<br>[2-PROPANOL]                                        | acetone                     | Urine               | Sampling time: End of shift.          | 25 mg/l | DE BGW                        |        |                        |
| Butan-1-ol<br>71-36-3                                                         | 1-Butanol (with hydrolysis) | Urine               | Sampling time: Before the next shift. | 2 mg/g  | DE BGW                        |        |                        |
| [Butan-1-ol (1-Butanol)]<br>Butan-1-ol<br>71-36-3<br>[Butan-1-ol (1-Butanol)] | 1-Butanol (with hydrolysis) | Urine               | Sampling time: End of work week.      | 10 mg/g | DE BGW                        |        |                        |
| 1-Methoxypropan-2-ol<br>107-98-2                                              | 1-Methoxyprop an-2-ol       | Urine               | Sampling time: End of shift.          | 15 mg/l | DE BGW                        |        |                        |

**8.2. Exposure controls:**

Engineering controls:  
Ensure good ventilation/extraction.

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;  $\geq 0.7$  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;  $\geq 0.7$  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:  
Goggles which can be tightly sealed.  
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         | liquid                              |
| Colour                | Black                               |
| Odor                  | alcohol-like                        |
| Physical state        | liquid                              |
| Melting point         | Not applicable, Product is a liquid |
| Initial boiling point | > 82 °C (> 179.6 °F)                |

|                                        |                                                                                                                                     |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Flammability                           | Currently under determination                                                                                                       |
| Explosive limits                       |                                                                                                                                     |
| lower                                  | 2,0 %(V);                                                                                                                           |
| upper                                  | 12,0 %(V);                                                                                                                          |
|                                        | Upper/lower explosion limit                                                                                                         |
| Flash point                            | 11,6 °C (52.88 °F); Tagliabue closed cup                                                                                            |
| Auto-ignition temperature              | 280 °C (536 °F)                                                                                                                     |
| Decomposition temperature              | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH                                     | Product is non-soluble (in water),. Not applicable                                                                                  |
| Viscosity (kinematic)                  | > 20,5 mm2/s thixotropic                                                                                                            |
| (40 °C (104 °F); )                     |                                                                                                                                     |
| Viscosity, dynamic                     | 200 - 800 cp ACH QCM VBR-001; Viscosity Measurement                                                                                 |
| ()                                     |                                                                                                                                     |
| Solubility (qualitative)               | Disperses in water as a suspension                                                                                                  |
| Solubility (qualitative)               | Miscible                                                                                                                            |
| (20 °C (68 °F); Solvent: Water)        |                                                                                                                                     |
| Solubility (qualitative)               |                                                                                                                                     |
| Partition coefficient: n-octanol/water | Not applicable                                                                                                                      |
|                                        | Mixture                                                                                                                             |
| Vapour pressure                        | 42 mbar                                                                                                                             |
| (20 °C (68 °F))                        |                                                                                                                                     |
| Vapour pressure                        | 240 mbar                                                                                                                            |
| (50 °C (122 °F))                       |                                                                                                                                     |
| Density                                | 0,888 g/cm3 no method / method unknown                                                                                              |
| (20 °C (68 °F))                        |                                                                                                                                     |
| Relative vapour density:               | 2,07                                                                                                                                |
| (20 °C)                                | (Air = 1)                                                                                                                           |
| Particle characteristics               | Not applicable                                                                                                                      |
|                                        | Product is a liquid                                                                                                                 |

## 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reaction with strong oxidants.

### 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

See section reactivity.

### 10.6. Hazardous decomposition products

None if used for intended purpose.

In case of fire toxic gases can be released.

**SECTION 11: Toxicological information****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**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.

| Hazardous substances<br>CAS-No.  | Value<br>type | Value       | Species | Method                                                            |
|----------------------------------|---------------|-------------|---------|-------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | LD50          | 5.840 mg/kg | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| butan-1-ol<br>71-36-3            | LD50          | 790 mg/kg   | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |
| 1-methoxy-2-propanol<br>107-98-2 | LD50          | 3.739 mg/kg | rat     | EU Method B.1 (Acute Toxicity (Oral))                             |

**Acute dermal toxicity:**

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

| Hazardous substances<br>CAS-No.  | Value<br>type | Value         | Species | Method                                                              |
|----------------------------------|---------------|---------------|---------|---------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | LD50          | 12.870 mg/kg  | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| butan-1-ol<br>71-36-3            | LD50          | 3.430 mg/kg   | rabbit  | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| 1-methoxy-2-propanol<br>107-98-2 | LD50          | > 2.000 mg/kg | rat     | EU Method B.3 (Acute Toxicity (Dermal))                             |

**Acute inhalative toxicity:**

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

| Hazardous substances<br>CAS-No.  | Value<br>type | Value        | Test atmosphere | Exposure<br>time | Species | Method                                                                  |
|----------------------------------|---------------|--------------|-----------------|------------------|---------|-------------------------------------------------------------------------|
| butan-1-ol<br>71-36-3            | LC50          | > 17,76 mg/l | vapour          | 4 h              | rat     | equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity) |
| 1-methoxy-2-propanol<br>107-98-2 | LC50          | 55 mg/l      | vapour          | 4 h              | rat     | not specified                                                           |

**Skin corrosion/irritation:**

Prolonged or repeated skin contact can lead to skin degreasing and hence to skin irritation.

| Hazardous substances<br>CAS-No.  | Result         | Exposure<br>time | Species | Method                                                        |
|----------------------------------|----------------|------------------|---------|---------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | not irritating | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)      |
| butan-1-ol<br>71-36-3            | irritating     | 2 h              | rabbit  | not specified                                                 |
| 1-methoxy-2-propanol<br>107-98-2 | not irritating | 4 h              | rabbit  | EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

Causes serious eye damage.

| Hazardous substances<br>CAS-No.  | Result                                                | Exposure<br>time | Species | Method                                                                         |
|----------------------------------|-------------------------------------------------------|------------------|---------|--------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | Category 2A<br>(irritating to<br>eyes)                |                  | rabbit  | equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| butan-1-ol<br>71-36-3            | Category 1<br>(irreversible<br>effects on the<br>eye) |                  | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion)                          |
| 1-methoxy-2-propanol<br>107-98-2 | not irritating                                        |                  | rabbit  | EU Method B.5 (Acute Toxicity: Eye Irritation / Corrosion)                     |

**Respiratory or skin sensitization:**

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

| Hazardous substances<br>CAS-No.  | Result          | Test type                             | Species    | Method                                                                                   |
|----------------------------------|-----------------|---------------------------------------|------------|------------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | not sensitising | Buehler test                          | guinea pig | OECD Guideline 406 (Skin Sensitisation)                                                  |
| butan-1-ol<br>71-36-3            | not sensitising | Mouse local lymphnode<br>assay (LLNA) | mouse      | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 1-methoxy-2-propanol<br>107-98-2 | not sensitising | Guinea pig maximisation<br>test       | guinea pig | EU Method B.6 (Skin Sensitisation)                                                       |

**Germ cell mutagenicity:**

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

| Hazardous substances<br>CAS-No.  | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                                                            |
|----------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|---------------------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)              |
| Propan-2-ol<br>67-63-0           | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | equivalent or similar to OECD<br>Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test) |
| butan-1-ol<br>71-36-3            | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | Ames Test                                                                                         |
| butan-1-ol<br>71-36-3            | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                             |
| butan-1-ol<br>71-36-3            | negative | in vitro mammalian<br>cell micronucleus<br>test        | without                                    |         | not specified                                                                                     |
| 1-methoxy-2-propanol<br>107-98-2 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                                       |
| 1-methoxy-2-propanol<br>107-98-2 | negative | in vitro mammalian<br>chromosome<br>aberration test    | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                          |
| 1-methoxy-2-propanol<br>107-98-2 | negative | mammalian cell<br>gene mutation assay                  | without                                    |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                             |
| Propan-2-ol<br>67-63-0           | negative | intraperitoneal                                        |                                            | mouse   | equivalent or similar to OECD<br>Guideline 474 (Mammalian<br>Erythrocyte Micronucleus<br>Test)    |
| butan-1-ol<br>71-36-3            | negative | oral: gavage                                           |                                            | mouse   | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test)                                |
| 1-methoxy-2-propanol<br>107-98-2 | negative | intraperitoneal                                        |                                            | mouse   | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test)                                |

**Carcinogenicity**

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

| Hazardous components<br>CAS-No.  | Result           | Route of<br>application | Exposure<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method                                                                               |
|----------------------------------|------------------|-------------------------|-------------------------------------------------|---------|-------------|--------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           |                  | inhalation:<br>vapour   | 104 w<br>6 h/d, 5 d/w                           | rat     | male/female | OECD Guideline 451<br>(Carcinogenicity<br>Studies)                                   |
| 1-methoxy-2-propanol<br>107-98-2 | not carcinogenic | inhalation:<br>vapour   | 2 y<br>6 hr/day, 5<br>days/wk                   | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |

**Reproductive toxicity:**

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

| Hazardous substances<br>CAS-No.  | Result / Value                                            | Test type                  | Route of<br>application    | Species | Method                                                                                             |
|----------------------------------|-----------------------------------------------------------|----------------------------|----------------------------|---------|----------------------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | NOAEL P 853 mg/kg                                         | One<br>generation<br>study | oral:<br>drinking<br>water | rat     | equivalent or similar to<br>OECD Guideline 415 (One-<br>Generation Reproduction<br>Toxicity Study) |
| Propan-2-ol<br>67-63-0           | NOAEL P 500 mg/kg<br>NOAEL F1 1.000 mg/kg                 | Two<br>generation<br>study | oral: gavage               | rat     | equivalent or similar to<br>OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study) |
| butan-1-ol<br>71-36-3            | NOAEL P 500 mg/kg                                         | Two<br>generation<br>study | oral: gavage               | rat     | not specified                                                                                      |
| butan-1-ol<br>71-36-3            | NOAEL P 2000 ppm<br>NOAEL F1 2000 ppm                     | Two<br>generation<br>study | inhalation:<br>vapour      | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)                             |
| 1-methoxy-2-propanol<br>107-98-2 | NOAEL P 300 ppm<br>NOAEL F1 1000 ppm<br>NOAEL F2 1000 ppm | Two<br>generation<br>study | inhalation:<br>vapour      | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>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<br>exposure | Target Organs | Remarks |
|----------------------------------|---------------------------------------|----------------------|---------------|---------|
| butan-1-ol<br>71-36-3            | May cause respiratory irritation.     |                      |               |         |
| butan-1-ol<br>71-36-3            | May cause drowsiness or<br>dizziness. |                      |               |         |
| 1-methoxy-2-propanol<br>107-98-2 | May cause drowsiness or<br>dizziness. |                      |               |         |

**STOT-repeated exposure:**

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

| Hazardous substances<br>CAS-No.  | Result / Value  | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method                                                                   |
|----------------------------------|-----------------|-------------------------|----------------------------------------------|---------|--------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           |                 | inhalation:<br>vapour   | 104 w<br>6 h/d, 5 d/w                        | rat     | OECD Guideline 451<br>(Carcinogenicity Studies)                          |
| butan-1-ol<br>71-36-3            | NOAEL 125 mg/kg | oral: gavage            | 13 w<br>daily                                | rat     | not specified                                                            |
| 1-methoxy-2-propanol<br>107-98-2 | NOAEL 1000 ppm  | inhalation              | 13 weeks<br>6 hours/day; 5<br>days/week      | rat     | OECD Guideline 413<br>(Subchronic Inhalation<br>Toxicity: 90-Day)        |
| 1-methoxy-2-propanol<br>107-98-2 | NOAEL 919 mg/kg | oral: gavage            | 35 d<br>5 d/w                                | rat     | OECD Guideline 407<br>(Repeated Dose 28-Day<br>Oral Toxicity in Rodents) |

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

| Hazardous substances<br>CAS-No. | Viscosity (kinematic)<br>Value | Temperature | Method              | Remarks |
|---------------------------------|--------------------------------|-------------|---------------------|---------|
| Propan-2-ol<br>67-63-0          | 1,8 mm <sup>2</sup> /s         | 40 °C       | ASTM Standard D7042 |         |

**11.2 Information on other hazards**

not applicable

**SECTION 12: Ecological information****General ecological information:**

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

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**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<br>type | Value                 | Exposure time | Species             | Method                                            |
|----------------------------------|---------------|-----------------------|---------------|---------------------|---------------------------------------------------|
| Propan-2-ol<br>67-63-0           | LC50          | > 9.640 - 10.000 mg/l | 96 h          | Pimephales promelas | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |
| butan-1-ol<br>71-36-3            | LC50          | 1.376 mg/l            | 96 h          | Pimephales promelas | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |
| 1-methoxy-2-propanol<br>107-98-2 | LC50          | 20.800 mg/l           | 96 h          | Pimephales promelas | OECD Guideline 203 (Fish,<br>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<br>type | Value       | Exposure time | Species       | Method                                                           |
|----------------------------------|---------------|-------------|---------------|---------------|------------------------------------------------------------------|
| butan-1-ol<br>71-36-3            | EC50          | 1.328 mg/l  | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| 1-methoxy-2-propanol<br>107-98-2 | EC50          | 23.300 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |

**Chronic toxicity (aquatic invertebrates):**

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value    | Exposure time | Species       | Method                                         |
|---------------------------------|---------------|----------|---------------|---------------|------------------------------------------------|
| Propan-2-ol<br>67-63-0          | NOEC          | 30 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |
| butan-1-ol<br>71-36-3           | NOEC          | 4,1 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>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<br>type | Value        | Exposure time | Species                                                                     | Method                                               |
|----------------------------------|---------------|--------------|---------------|-----------------------------------------------------------------------------|------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | EC50          | > 1.000 mg/l | 96 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Propan-2-ol<br>67-63-0           | NOEC          | 1.000 mg/l   | 96 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| butan-1-ol<br>71-36-3            | EC50          | 225 mg/l     | 96 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| butan-1-ol<br>71-36-3            | NOEC          | 129 mg/l     | 96 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 1-methoxy-2-propanol<br>107-98-2 | EC50          | > 1.000 mg/l | 7 d           | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>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<br>type | Value        | Exposure time | Species            | Method                                                                   |
|----------------------------------|---------------|--------------|---------------|--------------------|--------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | EC50          | > 1.000 mg/l | 3 h           | activated sludge   | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |
| butan-1-ol<br>71-36-3            | EC10          | 2.476 mg/l   | 17 h          | Pseudomonas putida | DIN 38412, part 8<br>(Pseudomonas<br>Zellvermehrungshemm-<br>Test)       |
| 1-methoxy-2-propanol<br>107-98-2 | EC0           | > 1.000 mg/l | 30 min        |                    | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |

#### 12.2. Persistence and degradability

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

| Hazardous substances<br>CAS-No.  | Result                | Test type | Degradability | Exposure<br>time | Method                                                                                     |
|----------------------------------|-----------------------|-----------|---------------|------------------|--------------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | readily biodegradable | aerobic   | 70 - 84 %     | 30 d             | EU Method C.4-E (Determination<br>of the "Ready"<br>BiodegradabilityClosed Bottle<br>Test) |
| butan-1-ol<br>71-36-3            | readily biodegradable | aerobic   | 70 - 81 %     | 30 d             | EU Method C.4-E (Determination<br>of the "Ready"<br>BiodegradabilityClosed Bottle<br>Test) |
| 1-methoxy-2-propanol<br>107-98-2 | readily biodegradable | aerobic   | 96 %          | 28 d             | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test)          |

#### 12.3. Bioaccumulative potential

No data available.

#### 12.4. Mobility in soil

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

| Hazardous substances<br>CAS-No.  | LogPow | Temperature | Method                                                                             |
|----------------------------------|--------|-------------|------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | 0,05   |             | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| butan-1-ol<br>71-36-3            | 1      | 25 °C       | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)        |
| 1-methoxy-2-propanol<br>107-98-2 | -0,49  |             | not specified                                                                      |

#### 12.5. Results of PBT and vPvB assessment

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

| Hazardous substances<br>CAS-No.  | PBT / vPvB                                                                                                            |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Propan-2-ol<br>67-63-0           | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| butan-1-ol<br>71-36-3            | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 1-methoxy-2-propanol<br>107-98-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product disposal:

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

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  | 1263 |
| RID  | 1263 |
| ADN  | 1263 |
| IMDG | 1263 |
| IATA | 1263 |

### 14.2. UN proper shipping name

|      |       |
|------|-------|
| ADR  | PAINT |
| RID  | PAINT |
| ADN  | PAINT |
| IMDG | PAINT |
| IATA | Paint |

### 14.3. Transport hazard class(es)

|      |   |
|------|---|
| ADR  | 3 |
| RID  | 3 |
| ADN  | 3 |
| IMDG | 3 |
| IATA | 3 |

### 14.4. Packing group

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

### 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  | Special provision 640D<br>Tunnelcode: (D/E) |
| RID  | Special provision 640D                      |
| ADN  | Special provision 640D                      |
| 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 |
| VOC content<br>(2010/75/EU)                                    | 78,4 %         |

### 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: | 3                                                                                                                                                                           |

### 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:

H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2  | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

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