

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

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# BONDERITE C-MC 1204 ALKALINE MAINTENANCE CLEANER

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

### 1.1. Product identifier

BONDERITE C-MC 1204 ALKALINE MAINTENANCE CLEANER

**1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use: Cleaners for Industrial Application

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

Henkel AG & Co. KGaA Henkelstr. 67 40589 Düsseldorf

#### Germany

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For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection 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):

Skin irritation H315 Causes skin irritation. Serious eye damage H318 Causes serious eye damage. Category 2

Category 1

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Alcohols, C9-11-iso-, C10-rich, 5EO

| Signal word:                           | Danger  |
|--|---|
| Hazard statement:                      | H315 Causes skin irritation.<br>H318 Causes serious eye damage.   |
| Precautionary statement:<br>Prevention | P280 Wear protective gloves/eye protection.   |
| Precautionary statement:<br>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.<br>P310 Immediately call a POISON CENTER or doctor. |

### 2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

# Following substances are present in a concentration >= 0,1% and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

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

# SECTION 3: Composition/information on ingredients

# 3.2. Mixtures

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-RegNo.           | C on centration | Classification  | Specific Conc. Limits, M-<br>factors and ATEs                            | Add.<br>Information |
|--|-----------------|---|--|---------------------|
| 2-Methylpentane-2,4-diol<br>107-41-5<br>203-489-0<br>01-2119539582-35  | 1-< 5%          | Eye Irrit. 2, H319<br>Skin Irrit. 2, H315   | oral:ATE=2.500 mg/kg   |                     |
| Alcohols, C9-11-iso-, C10-rich,<br>5EO<br>78330-20-8                   | 1-< 5%          | Eye Dam. 1, H318<br>Acute Tox. 4, Oral, H302  |  |                     |
| 2-aminoethanol<br>141-43-5<br>205-483-3<br>01-2119486455-28            | 1-< 5%          | Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Dermal, H312<br>Eye Dam. 1, H318<br>Skin Corr. 1B, H314<br>Acute Tox. 4, Inhalation, H332<br>STOT SE 3, H335<br>Aquatic Chronic 3, H412 | STOT SE 3; H335; C>=5 %<br>=====<br>inhalation:ATE=1,5<br>mg/l;dust/mist | EU OEL              |
| (2-<br>Methoxy)propanol<br>34590-94-8<br>252-104-2<br>01-2119450011-60 | 1-< 5%          |   |  | EU OEL              |

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

For full text of the H - statements and other abbreviations see section 16 "Other information". Substances without classification may have community workplace exposure limits available. Declaration of ingredients according to Detergent Regulation 648/2004/EC

< 5 %

phosphates non-ionic surfactants

### **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact: IF ON SKIN: Wash with plenty of soap and water. 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:

Drink 1-2 glasses of water, do not induce vomiting, administer an antifoaming agent (sab simplex), seek medical attention.

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

SKIN: Redness, inflammation.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

#### 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 Water spray jet

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 self-contained breathing apparatus. Wear protective equipment.

#### 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.

Remove with liquid-absorbing material (sand, peat, sawdust).

### 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

### Hygiene measures:

Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working. Take off contaminated clothing and wash before reuse. The workplace should be equipped with an emergency shower and eye-rinsing facility.

# 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool, frost-free place. Keep container tightly sealed. Keep container in a well ventilated place. Do not use packing made of metal. Must be stored in a room with spill collection facilities. Do not expose to direct heat. Do not store together with strong acids.

#### 7.3. Specific enduse(s)

Cleaners for Industrial Application

# 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                             | Shortterm exposure limit<br>category / Remarks   | Regulatory list |
|---|-----|-------------------|--|--|-----------------|
| (2-Methoxymethylethoxy)propanol<br>34590-94-8<br>[(2-METHOXYMETHYLETHOXY)-<br>PROPANOL] | 50  | 308               | Time Weighted Average<br>(TWA):        | Indicative   | ECTLV           |
| (2-Methox ymethy lethoxy)propanol<br>34590-94-8   |     |                   | Short Term Exposure<br>Classification: | Category I: substances for<br>which the localized effect has<br>an assigned OEL or for<br>substances with a sensitizing<br>effect in respiratory passages. | T RGS 900       |
| (2-Methox ymethy lethoxy )propanol<br>34590-94-8  | 50  | 310               | Exposure limit(s):                     | 1  | TRGS 900        |
| 2-Aminoethanol<br>141-43-5<br>[2-AMINOETHANOL]  | 3   | 7,6               | Short Term Exposure<br>Limit (STEL):   | Indicative   | ECTLV           |
| 2-Aminoethanol<br>141-43-5<br>[2-AMINOETHANOL]  | 1   | 2,5               | Time Weighted Average<br>(TWA):        | Indicative   | ECTLV           |
| 2-Aminoethanol<br>141-43-5  |     |                   | Short Term Exposure<br>Classification: | Category I: substances for<br>which the localized effect has<br>an assigned OEL or for<br>substances with a sensitizing<br>effect in respiratory passages. | T RGS 900       |
| 2-Aminoethanol<br>141-43-5  | 0,2 | 0,5               | Exposure limit(s):                     | 1<br>If the AGW and BGW values<br>are complied with, there<br>should be no risk of<br>reproductive damage (see<br>Number 2.7).                             | T RGS 900       |
| 2-Aminoethanol<br>141-43-5  |     |                   | Skin designation:                      | Can be absorbed through the skin.  | TRGS 900        |

# Predicted No-Effect Concentration (PNEC):

| Name on list                                  | En vironmental<br>Compartment | Value      |     |            |        | Remarks |
|---|-------------------------------|------------|-----|------------|--------|---------|
|   |                               | <br>mg/l   | ppm | mg/kg      | others |         |
| 2-methylpentane-2,4-diol                      | aqua                          | 0,429 mg/l |     | 8          |        |         |
| 107-41-5                                      | (freshwater)                  | -, - 8     |     |            |        |         |
| 2-methylpentane-2,4-diol                      | aqua (marine                  | 0.0429     |     |            |        |         |
| 107-41-5                                      | water)                        | mg/l       |     |            |        |         |
| 2-methylpentane-2,4-diol                      | aqua                          | 4,29 mg/l  |     |            |        |         |
| 107-41-5                                      | (intermittent                 | ,          |     |            |        |         |
|   | releases)                     |            |     |            |        |         |
| 2-methylpentane-2,4-diol                      | sewage                        | 20 mg/l    |     |            |        |         |
| 107-41-5                                      | treatment plant               | C          |     |            |        |         |
|   | (STP)                         |            |     |            |        |         |
| 2-methylpentane-2,4-diol                      | sediment                      |            |     | 1,59 mg/kg |        |         |
| 107-41-5                                      | (freshwater)                  |            |     | , , ,      |        |         |
| 2-methylpentane-2,4-diol                      | sediment                      |            |     | 0,159      |        |         |
| 107-41-5                                      | (marine water)                |            |     | mg/kg      |        |         |
| 2-methylpentane-2,4-diol                      | Soil                          |            |     | 0,066      |        |         |
| 107-41-5                                      |                               |            |     | mg/kg      |        |         |
| 2-Aminoethanol                                | aqua                          | 0,07 mg/l  |     |            |        |         |
| 141-43-5                                      | (freshwater)                  |            |     |            |        |         |
| 2-Aminoethanol                                | aqua (marine                  | 0,007 mg/l |     |            |        |         |
| 141-43-5                                      | water)                        |            |     |            |        |         |
| 2-Aminoethanol                                | aqua                          | 0,028 mg/l |     |            |        |         |
| 141-43-5                                      | (intermittent                 |            |     |            |        |         |
|   | releases)                     |            |     |            |        |         |
| 2-Aminoethanol                                | sediment                      |            |     | 0,357      |        |         |
| 141-43-5                                      | (freshwater)                  |            |     | mg/kg      |        |         |
| 2-Aminoethanol                                | sediment                      |            |     | 0,036      |        |         |
| 141-43-5                                      | (marine water)                |            |     | mg/kg      |        |         |
| 2-Aminoethanol                                | Soil                          |            |     | 1,29 mg/kg |        |         |
| 141-43-5                                      |                               |            |     |            |        |         |
| 2-Aminoethanol                                | sewage                        | 100 mg/l   |     |            |        |         |
| 141-43-5                                      | treatment plant               |            |     |            |        |         |
|   | (STP)                         |            |     |            |        |         |
| (2-Methoxymethylethoxy)propanol               | aqua                          | 19 mg/l    |     |            |        |         |
| 34590-94-8                                    | (freshwater)                  |            |     |            |        |         |
| (2-Methoxymethylethoxy)propanol               | aqua (marine                  | 1,9 mg/l   |     |            |        |         |
| 34590-94-8                                    | water)                        |            |     |            |        |         |
| (2-Methoxymethylethoxy)propanol               | sewage                        | 4168 mg/l  |     |            |        |         |
| 34590-94-8                                    | treatment plant               |            |     |            |        |         |
|   | (STP)                         |            |     |            |        |         |
| (2-Methoxymethylethoxy)propanol               | sediment                      |            |     | 70,2 mg/kg |        |         |
| 34590-94-8                                    | (freshwater)                  | +          |     | 7.00 "     |        |         |
| (2-Methoxymethylethoxy)propanol               | sediment                      |            |     | 7,02 mg/kg |        |         |
| 34590-94-8                                    | (marine water)                | <br>+      |     | 0.74       |        |         |
| (2-Methoxymethylethoxy)propanol               | Soil                          |            |     | 2,74 mg/kg |        |         |
| 34590-94-8<br>(2-Methoxymethylethoxy)propanol |                               | 100        |     |            |        |         |
| (2-Methoxymethylethoxy)propanol<br>34590-94-8 | aqua<br>(intermittent         | 190 mg/l   |     |            |        |         |
| 34370-74-8                                    | (intermittent releases)       |            |     |            |        |         |
|   | Teleases)                     | 1          | I   |            |        |         |

# Derived No-Effect Level (DNEL):

| Name on list                                       | Application<br>Area | Route of<br>Exposure | Health Effect                                   | Exposure<br>Time | Value      | Remarks |
|--|---------------------|----------------------|---|------------------|------------|---------|
| 2-methylpentane-2,4-diol<br>107-41-5               | Workers             | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 98 mg/m3   |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | Workers             | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 44,4 mg/m3 |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | Workers             | inhalation           | Long term<br>exposure - local<br>effects        |                  | 49 mg/m3   |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 42 mg/kg   |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | General population  | inhalation           | Acute/short term<br>exposure - local<br>effects |                  | 49 mg/m3   |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | General population  | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 7,8 mg/m3  |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | General population  | inhalation           | Longterm<br>exposure - local<br>effects         |                  | 25 mg/m3   |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | General population  | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 1,5 mg/kg  |         |
| 2-methylpentane-2,4-diol<br>107-41-5               | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 15 mg/kg   |         |
| 2-Aminoethanol<br>141-43-5                         | Workers             | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 1 mg/m3    |         |
| 2-Aminoethanol<br>141-43-5                         | Workers             | inhalation           | Long term<br>exposure - local<br>effects        |                  | 0,51 mg/m3 |         |
| 2-Aminoethanol<br>141-43-5                         | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 3 mg/kg    |         |
| 2-Aminoethanol<br>141-43-5                         | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 1,5 mg/kg  |         |
| 2-Aminoethanol<br>141-43-5                         | General population  | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 1,5 mg/kg  |         |
| 2-Aminoethanol<br>141-43-5                         | General population  | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 0,18 mg/m3 |         |
| 2-Aminoethanol<br>141-43-5                         | General population  | inhalation           | Long term<br>exposure - local<br>effects        |                  | 0,28 mg/m3 |         |
| (2-Methox ymethy lethoxy)propanol<br>34590-94-8    | Workers             | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 308 mg/m3  |         |
| (2-Methox ymethy lethoxy)propanol<br>34590-94-8    | Workers             | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 283 mg/kg  |         |
| (2-Methox ymethy lethoxy)propanol<br>34590-94-8    | General population  | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 36 mg/kg   |         |
| (2-Met hox ymethy leth oxy )propanol<br>34590-94-8 | General population  | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 37,2 mg/m3 |         |
| (2-Methox ymethy lethoxy)propanol<br>34590-94-8    | General population  | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 121 mg/kg  |         |

#### Biological Exposure Indices: None

#### 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): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 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

| 1, 1   | 1  |
|--|--|
| Physical state                               | liquid   |
| Delivery form                                | liquid   |
| Colour                                       | colourless, up to,                               |
|  | light yellow                                     |
| Odor   | no valuation                                     |
| Initial boiling point                        | >= 100  °C ( $>= 212  °F$ )no method             |
| Flash point                                  | No flash point up to 100°C. Aqueous preparation. |
| pH   | 10,2 - 11,2 PH-value, potentiometer              |
| (20 °C (68 °F); Conc.: 100 % product)        | -  |
| pH   | 9,7 - 10,7 PH-value, potentiometer               |
| (20 °C (68 °F); Conc.: 1 % product; Solvent: | -  |
| Demineralised water)                         |  |
| Solubility (qualitative)                     | Miscible   |
| (20 °C (68 °F); Solvent: Water)              |  |
| Density                                      | 1,020 - 1,040 g/cm3 Density, oscillation         |
| (20 °C (68 °F))                              |  |
|  |  |

### 9.2. Other information

Other information not applicable for this product

# SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reaction with strong acids. 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**

# 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  |
|---|--|---------------|---------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | LD50                                   | > 2.000 mg/kg | rat     | OECD Guideline 420 (Acute Oral Toxicity)                          |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | Acute<br>toxicity<br>estimate<br>(ATE) | 2.500 mg/kg   |         | Expert judgement  |
| 2-aminoethanol<br>141-43-5                            | LD50                                   | 1.515 mg/kg   | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | LD50                                   | 8.740 mg/kg   | rat     | not specified   |

#### Acute dermal toxicity:

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

| Haz ardous substances                                 | Value | Value         | Species | Method                                     |
|---|-------|---------------|---------|--|
| CAS-No.   | type  |               |         |  |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | LD50  | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| Alcohols, C9-11-iso-,<br>C10-rich, 5EO<br>78330-20-8  | LD50  | > 2.000 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2-aminoethanol<br>141-43-5                            | LD50  | 1.025 mg/kg   | rabbit  | not specified                              |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | LD50  | 9.510 mg/kg   | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |

# 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           |
|---|--|--------------|-----------------|------------------|---------|------------------|
| 2-aminoethanol<br>141-43-5                            | Acute<br>toxicity<br>estimate<br>(ATE) | 1,5 mg/l     | dust/mist       |                  |         | Expert judgement |
| 2-aminoethanol<br>141-43-5                            | LC50                                   | 1 - 5 mg/l   |                 | 4 h              | rat     | not specified    |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | LC50                                   | 55 - 60 mg/l |                 | 4 h              | rat     | not specified    |

### Skin corrosion/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<br>time | Species | Method   |
|---|------------------------|------------------|---------|--|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | slightly<br>irritating | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation/Corrosion)                               |
| Alcohols, C9-11-iso-,<br>C10-rich, 5EO<br>78330-20-8  | not irritating         |                  | rabbit  | OECD Guideline 404 (Acute Dermal Irritation/Corrosion)                               |
| 2-aminoethanol<br>141-43-5                            | corrosive              | 4 h              | rabbit  | equivalent or similar to OECD Guideline 404 (Acute<br>Dermal Irritation / Corrosion) |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not irritating         | 2 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation/Corrosion)                               |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not irritating         |                  | human   | not specified  |

# 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<br>time | Species | Method  |
|---|--------------------------|------------------|---------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | moderately<br>irritating |                  | rabbit  | Draize Test   |
| Alcohols, C9-11-iso-,<br>C10-rich, 5EO<br>78330-20-8  | corrosive                |                  | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 2-aminoethanol<br>141-43-5                            | corrosive                |                  | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not irritating           |                  | human   | not specified   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not irritating           |                  | rabbit  | Draize T est  |

# 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                                  |
|---|-----------------|------------------------------|------------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | not sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 2-aminoethanol<br>141-43-5                            | not sensitising | Guinea pig maximisation test | guinea pig | not specified                           |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not sensitising | Patch-Test                   | human      | human repeat insult patch test          |

# 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  |
|---|----------|---|--|---------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)   |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | negative | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)  |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| 2-aminoethanol<br>141-43-5                            | 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)  |
| 2-aminoethanol<br>141-43-5                            | negative | in vitro mammalian<br>chromosome<br>aberration test   | without                                    |         | equivalent or similar to OECD<br>Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                              |
| 2-aminoethanol<br>141-43-5                            | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test)  | with and without                           |         | Ames Test   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | yeast cytogenetic<br>assay  | with and without                           |         | OECD Guideline 481 (Genetic<br>Toxicology: Saccharomyces<br>cerevisiae, Mitotic<br>Recombination Assay)                           |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | in vitro mammalian<br>chromosome<br>aberration test   | with and without                           |         | JAPAN: Guidelines for<br>Screening Mutagenicity<br>Testing Of Chemicals   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | DNA damage and<br>repair assay,<br>unscheduled DNA<br>synthesis in<br>mammalian cells in<br>vitro | not applicable                             |         | OECD Guideline 482 (Genetic<br>Toxicology: DNA Damage<br>and Repair, Unscheduled<br>DNA Synthesis in Mammalian<br>Cells In Vitro) |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | mammalian cell<br>gene mutation assay   | without                                    |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | negative | mammalian cell<br>gene mutation assay   | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)   |
| 2-aminoethanol<br>141-43-5                            | negative | oral: gavage  |  | 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 application  | Exposure<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method  |
|---|------------------|-----------------------|---|---------|-------------|---|
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | not carcinogenic | inhalation:<br>vapour | 2 years<br>6 h/day; 5<br>days/week              | 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.                       | <b>Result</b> / Value   | Test type                   | Route of application  | Species | Method   |
|---|---|-----------------------------|-----------------------|---------|--|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | NOAEL P >= 1.000 mg/kg<br>NOAEL F1 500 mg/kg                      | screening                   | oral: gavage          | rat     | OECD Guideline 421<br>(Reproduction /<br>Developmental Toxicity<br>Screening Test) |
| 2-aminoethanol<br>141-43-5                            | NOAEL P 300 mg/kg<br>NOAEL F1 1.000 mg/kg<br>NOAEL F2 1.000 mg/kg | T wo<br>generation<br>study | oral: feed            | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)             |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | 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:

No data available.

# 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.                       | <b>Result</b> / Value | Route of application  | Exposure time /<br>Frequency of<br>treatment            | Species | Method   |
|---|-----------------------|-----------------------|---|---------|--|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | NOAEL 450 mg/kg       | oral: gavage          | 13 w<br>daily   | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents)     |
| 2-aminoethanol<br>141-43-5                            | NOAEL 300 mg/kg       | oral: feed            | > 75 d<br>daily   | rat     | other guideline:   |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | NOAEL > 50 mg/l       | inhalation            | 2 weeks (9<br>exposures)<br>6 hours/day; 5<br>days/week | rabbit  | not specified  |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | NOAEL 1.000 mg/kg     | oral: gavage          | 4 weeks<br>daily  | rat     | not specified  |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | NOAEL 200 ppm         | inhalation:<br>vapour | 13 weeks<br>6 hours/day; 5<br>days/week                 | rat     | OECD Guideline 413<br>(Subchronic Inhalation<br>Toxicity: 90-Day)            |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | NOAEL 2.850 mg/kg     | dermal                | 90 d<br>5 days/week                                     | rabbit  | OECD Guideline 411<br>(Subchronic Dermal<br>Toxicity: 90-Day Study)          |
| (2-<br>Methoxymethylethoxy)pr<br>opanol<br>34590-94-8 | NOAEL > 1.000 mg/kg   | dermal                | 4 weeks<br>4 hours/day; 5<br>days/week                  | rat     | OECD Guideline 410<br>(Repeated Dose Dermal<br>Toxicity: 21/28-Day<br>Study) |

# Aspiration hazard:

No data available.

# 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 biodegradability of the surfactants contained in the product is in accordance with the requirements of the EU Detergent Regulation (EC/648/2004).

The surfactants contained in the products are primary biodegradable to at least 90% on average.

#### 12.1. Toxicity

# Toxicity (Fish):

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

| Haz ardous substances      | Value | Value        | <b>Exposure time</b> | Species                      | Method                          |
|----------------------------|-------|--------------|----------------------|------------------------------|---------------------------------|
| CAS-No.                    | type  |              | _                    |                              |                                 |
| 2-Methylpentane-2,4-diol   | LC50  | > 1.000 mg/l | 96 h                 | Brachydanio rerio (new name: | not specified                   |
| 107-41-5                   |       |              |                      | Danio rerio)                 |                                 |
| Alcohols, C9-11-iso-, C10- | LC50  | 1 - 10 mg/l  | 96 h                 | Leuciscus idus               | OECD Guideline 203 (Fish,       |
| rich, 5EO                  |       |              |                      |                              | Acute Toxicity Test)            |
| 78330-20-8                 |       |              |                      |                              |                                 |
| 2-aminoethanol             | LC50  | 349 mg/l     | 96 h                 | Cyprinus carpio              | EU Method C.1 (Acute            |
| 141-43-5                   |       |              |                      |                              | Toxicity for Fish)              |
| 2-aminoethanol             | NOEC  | 1,24 mg/l    | 41 d                 | Oryzias latipes              | OECD Guideline 210 (fish        |
| 141-43-5                   |       |              |                      |                              | early lite stage toxicity test) |
| (2-                        | LC50  | > 1.000 mg/l | 96 h                 | Poecilia reticulata          | OECD Guideline 203 (Fish,       |
| Methoxymethylethoxy)propan |       |              |                      |                              | Acute Toxicity Test)            |
| ol                         |       |              |                      |                              |                                 |
| 34590-94-8                 |       |              |                      |                              |                                 |

# Toxicity (Daphnia):

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

|                            | Value | Value         | <b>Exposure time</b> | Species       | Method               |
|----------------------------|-------|---------------|----------------------|---------------|----------------------|
| CAS-No.                    | type  |               |                      |               |                      |
| J I                        | EC50  | 3.200 mg/l    | 48 h                 | Daphnia magna | OECD Guideline 202   |
| 107-41-5                   |       |               |                      |               | (Daphnia sp. Acute   |
|                            |       |               |                      |               | Immobilisation Test) |
| Alcohols, C9-11-iso-, C10- | EC50  | 10 - 100 mg/l | 48 h                 | Daphnia magna | OECD Guideline 202   |
| rich, 5EO                  |       |               |                      |               | (Daphnia sp. Acute   |
| 78330-20-8                 |       |               |                      |               | Immobilisation Test) |
| 2-aminoethanol             | EC50  | 27,04 mg/l    | 48 h                 | Daphnia magna | OECD Guideline 202   |
| 141-43-5                   |       | -             |                      |               | (Daphnia sp. Acute   |
|                            |       |               |                      |               | Immobilisation Test) |
| (2-                        | EC50  | 1.919 mg/l    | 48 h                 | Daphnia magna | OECD Guideline 202   |
| Methoxymethylethoxy)propan |       |               |                      |               | (Daphnia sp. Acute   |
| ol                         |       |               |                      |               | Immobilisation Test) |
| 34590-94-8                 |       |               |                      |               |                      |

### Chronic toxicity to aquatic invertebrates

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     | Exposu re time | Species | Method   |
|---------------------------------|---------------|-----------|----------------|---------|--|
| 2-aminoethanol<br>141-43-5      | NOEC          | 0,85 mg/l | 21 d           | 1 0     | OECD 211 (Daphnia<br>magna, Reproduction Test) |

Toxicity (Algae):

| Hazardous substances                                  | Value | Value         | <b>Exposure time</b> | Species  | Method   |
|---|-------|---------------|----------------------|--|--|
| CAS-No.   | type  |               | _                    | -  |  |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | NOEC  | > 429 mg/l    | 72 h                 | Selenastrum capricomutum<br>(new name: Pseudokirchneriella<br>subcapitata)   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-Methylpentane-2,4-diol<br>107-41-5                  | EC50  | > 429 mg/l    | 72 h                 | Selenastrum capricomutum<br>(newname: Pseudokirchneriella<br>subcapitata)    | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Alcohols, C9-11-iso-, C10-<br>rich, 5EO<br>78330-20-8 | EC50  | 10 - 100 mg/l | 72 h                 | not specified  | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-aminoethanol<br>141-43-5                            | EC50  | 2,8 mg/l      | 72 h                 | Pseudokirchneriella subcapitata<br>(reported as Raphidocelis<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2-aminoethanol<br>141-43-5                            | EC10  | 0,7 mg/l      | 72 h                 | Pseudokirchneriella subcapitata<br>(reported as Raphidocelis<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| (2-<br>Methoxymethylethoxy)propan<br>ol<br>34590-94-8 | EC50  | > 969 mg/l    | 72 h                 | Pseudokirchneriella subcapitata  | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| (2-<br>Methoxymethylethoxy)propan<br>ol<br>34590-94-8 | NOEC  | 969 mg/l      | 72 h                 | P seudo kirchneriella subcapitata  | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

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

# Toxicity to microorganisms

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

| Hazardous substances                 | Value | Value        | Exposu re time | Species             | Method                       |
|--------------------------------------|-------|--------------|----------------|---------------------|------------------------------|
| CAS-No.                              | type  |              |                |                     |                              |
| 2-Methylpentane-2,4-diol<br>107-41-5 | EC0   | 2.000 mg/l   | 16 h           |                     | not specified                |
| 2-aminoethanol                       | EC 50 | > 1.000 mg/l | 3 h            |                     | OECD Guideline 209           |
| 141-43-5                             |       | _            |                |                     | (Activated Sludge,           |
|                                      |       |              |                |                     | Respiration Inhibition Test) |
| (2-                                  | EC10  | 4.168 mg/l   | 18 h           | P seudomonas putida | other guideline:             |
| Methoxymethylethoxy)propan           |       | _            |                | _                   | -                            |
| ol                                   |       |              |                |                     |                              |
| 34590-94-8                           |       |              |                |                     |                              |

# 12.2. Persistence and degradability

| Hazardous substances<br>CAS-No.                       | Result                   | Test type | Degradability | Exposure<br>time | Method  |
|---|--------------------------|-----------|---------------|------------------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | readily biodegradable    | aerobic   | 90 %          | 28 d             | ISO 10708 (BODIS-Test)  |
| Alcohols, C9-11-iso-, C10-<br>rich, 5EO<br>78330-20-8 | readily biodegradable    | aerobic   | > 60 %        | 28 day           | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test)           |
| 2-aminoethanol<br>141-43-5                            | readily biodegradable    | aerobic   | > 80 %        | 19 d             | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test)           |
| (2-<br>Methoxymethylethoxy)propan<br>ol<br>34590-94-8 | readily biodegradable    | aerobic   | 76 %          | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| (2-<br>Methoxymethylethoxy)propan<br>ol<br>34590-94-8 | inherently biodegradable | aerobic   | 94 %          | 13 d             | OECD Guideline 302 B (Inherent<br>biodegradability: Zahn-<br>Wellens/EMPA Test)   |

# 12.3. Bioaccumulative potential

No data available.

# 12.4. Mobility in soil

| Hazardous substances<br>CAS-No.                       | LogPow | Temperature | Method  |
|---|--------|-------------|---|
| 2-Methylpentane-2,4-diol<br>107-41-5                  | 0,58   |             | not specified   |
| 2-aminoethanol<br>141-43-5                            | -1,91  | 25 °C       | OECD Guideline 107 (Partition Coefficient (n-octanol/water), Shake<br>Flask Method) |
| (2-<br>Methoxymethylethoxy)propan<br>ol<br>34590-94-8 | 0,004  | 25 ℃        | OECD Guideline 107 (Partition Coefficient (n-octanol/water), Shake<br>Flask Method) |

# 12.5. Results of PBT and vPvB assessment

| Hazardoussubstances                 | PBT/ vPvB  |
|-------------------------------------|--|
| CAS-No.                             |  |
| 2-Methylpentane-2,4-diol            | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 107-41-5                            | Bioaccumulative (vPvB) criteria.   |
| Alcohols, C9-11-iso-, C10-rich, 5EO | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 78330-20-8                          | Bioaccumulative (vPvB) criteria.   |
| 2-aminoethanol                      | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 141-43-5                            | Bioaccumulative (vPvB) criteria.   |
| (2-Methoxymethylethoxy)propanol     | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 34590-94-8                          | Bioaccumulative(vPvB) criteria.  |

### 12.6. Endocrine disrupting properties

not applicable

# 12.7. Other adverse effects

If acidic or alkaline products are discharged into wastewater installations care must be taken that the discharged wastewater has a pH in the range pH 6 - 10, as pH variations could cause disorders in wastewater channels and biological sewage treatment plants. 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.

Waste code

EWC/EAK 070608

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   |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 14.2. | UN proper shipping name                                   |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 14.3. | Transport hazard class(es)                                |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 14.4. | Packing group   |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 14.5. | Environmental hazards                                     |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 14.6. | S pecial precautions for user                             |  |
|       | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |  |
| 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 1005/2009): Not applicable Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Not applicable Persistent organic pollutants (Regulation (EU) 2019/1021): Not applicable VOC content 6,0 % (2010/75/EU)

### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

### National regulations/information (Germany):

#### WGK:

WGK 1: slightly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV) ) Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 10

### **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:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

| 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                   |

#### **Further information:**

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