

**BUEHLER****Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 04.12.2009

Revision: 04.12.2009

**1 Identification of the substance/preparation and of the company/undertaking**

- **Trade name:** Reciclean
- **Article number:** 41.302.00
- **Application of the substance / the preparation:** Preparation for industrial application
- **Manufacturer/Supplier:**  
Supplier:  
Bühler GmbH  
In der Steele 2  
40599 Düsseldorf  
E-Mail: info@buehler-met.de  
Internet: www.buehler-met.de
- **Further information obtainable from:**  
Bühler GmbH  
Phone +49 (0) 211/974 10-0  
Fax +49 (0) 211/974 10-79
- **Information in case of emergency:**  
Giftinformationszentrum  
Universitätsklinikum Mainz  
Emergency number: +49(0)6131/19240 (24 h)

**2 Hazards identification**

- **Hazard description:**



C Corrosive

- **Information concerning particular hazards for human and environment:**  
The standard application is mixed with water in process-dependant concentrations of approx. 1.0 - 2.0 %.  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
Heightened danger of slipping when the product is spilled on the floor.  
R 34 Causes burns.
- **After inhalation:**  
Concentrate: not applicable  
Water-mixed condition: Under unfavourable conditions, the use of water-mixed cooling lubricants and their associated additives can potentially generate aerosols and fumes. Long-term and repeated exposure can result in hypersensitivity and respiratory irritation. The exposure can be reduced through the application of suitable technical measures. For further information, please refer to the bibliographical references in Chapter 16.
- **After skin contact:**  
Chemical burns possible.  
Contact with the water-mixed cooling lubricant should be kept at a minimum and particular care should be taken to protect the skin. For further information, please refer to the bibliographical references in Chapter 16.
- **After eye contact:**  
Concentrate: The product acts as an irritant to the eyes. Rinse eyes immediately after any contact, see also Chapter 4.  
Water-mixed condition: Splashes of cooling lubricant can cause short-term irritations to the eyes. These irritations can be further increased by any solid particles (abraded materials/chips). Rinse eyes immediately after any contact, see also Chapter 4.
- **After swallowing:** Can cause nausea and vomiting. Small quantities do not cause lasting damage.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**3 Composition/information on ingredients**

- **Description:**  
Mixture contains biocidal substances, additives  
Mixture of substances listed below with nonhazardous additions.

(Contd. on page 2)

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(Contd. of page 1)

- <b>Dangerous components:</b>		
	Alkanolamine ☒ Xi; R 36	10-20%
CAS: 3586-55-8 EINECS: 222-720-6	(Ethylendioxy)dimethanole ☒ Xn, ☒ Xi; R 22-38-41	5-10%
CAS: 1310-58-3 EINECS: 215-181-3	potassium hydroxide ☒ C, ☒ Xn; R 22-35	1-5%
CAS: 28519-02-0 EINECS: 249-063-8	disodiumdodecyl(sulphonatophenoxy)benzenesulphonate ☒ Xi, ☒ N; R 41-51/53	1-5%
CAS: 3811-73-2 EINECS: 223-296-5	pyridine-2-thiol 1-oxide, sodium salt ☒ Xn, ☒ Xi, ☒ N; R 20/21/22-36/38-50	0,1-1%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

#### 4 First aid measures

- **General information:** No special measures required.
- **After inhalation:**  
Supply fresh air; consult doctor in case of complaints.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
Seek medical treatment.
- **After eye contact:**  
Concentrate: Rinse open eyes for several minutes under running water. If problems persist, seek medical advice.  
Wear safety goggles when handling concentrate.  
Water-mixed condition: Rinse open eyes under running water. If problems persist, seek medical advice and check eyes for foreign objects (abraded material/chips).
- **After swallowing:**  
Drink plenty of water and provide fresh air. Call for a doctor immediately.  
For concentrate and water-mixed condition: Do not induce vomiting; if problems persist, seek medical advice.

#### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

#### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Additional information:** See Section 13 for disposal information.

#### 7 Handling and storage

- **Handling:**
- **Information for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 3)

**Safety Data Sheet**  
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(Contd. of page 2)

Prevent formation of aerosols.



Concentrate: Wear safety goggles when handling concentrate. Change all contaminated items of clothing.  
Water-mixed condition: No special measures are required. Change all contaminated items of clothing.

- **Information about fire - and explosion protection:** No special measures required.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Unsuitable material for receptacles and pipes: Copper, Copper alloy and Zinc.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Keep container tightly sealed.

Storage temperature between 10 °C to 30 °C (= 50 °F to 86 °F).

In closed original container and at storage temperature of 30 °C (86 °F) maximum product keeps stable for at least 6 months.

- **Storage class:** 8

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**

Under unfavourable conditions, the use of water-mixed cooling lubricants can potentially generate aerosols and fumes. Long-term and repeated exposure can result in hypersensitivity and respiratory irritation. The exposure can be reduced through the application of suitable technical measures. For further information, please refer to the bibliographical references in Chapter 16.

- **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Do not inhale gases / fumes / aerosols.

Avoid close or long term contact with the skin.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Be sure to clean skin thoroughly after work and before breaks.

Do not carry product impregnated cleaning cloths in trouser pockets.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**

Protective gloves

Concentrate: The wearing of protective gloves is recommended when handling the concentrate. After short-term contact without gloves, wash affected areas thoroughly with soap and water.

Water-mixed condition: Hand protection is generally not required as long as protective ointments, cleansing and skin care creams are used. The wearing of protective gloves is recommended if compressed air is used to blow off the cooling lubricant, as the latter may contain solid particles.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves:**



Recommendation: 740 Dermatril (KCL, Germany) with a layer thickness of at least 0,1 mm

(Contd. on page 4)

**BUEHLER****Safety Data Sheet**  
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(Contd. of page 3)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**- Penetration time of glove material:**

The breakthrough-time for these gloves is &gt; 480 min (performance index: class 6)

**- Eye protection:**

Concentrate: Wear safety goggles.

Water-mixed condition: The wearing of safety goggles is recommended if compressed air is used to blow off the cooling lubricant, as the latter may contain solid particles.

**9 Physical and chemical properties****- General Information**

**Form:** Fluid  
**Colour:** Colourless  
**Odour:** Characteristic

- **Flash point:** Not applicable.
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20°C:** 1,05 g/cm<sup>3</sup> (DIN 51757)
- **Solubility in / Miscibility with water:** Fully miscible.
- **pH-value at 20°C:** >11 (DIN 51369)
- **Viscosity:**  
**Kinematic at 40°C:** 2 mm<sup>2</sup>/s (DIN 53018)

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** Avoid heating of concentrate > 100 °C (> 212 °F).
- **Dangerous reactions:** Reacts with strong acids and oxidizing agents.
- **Dangerous decomposition products:** Formaldehyde

**11 Toxicological information****- Acute toxicity:****- LD/LC50 values relevant for classification:****1310-58-3 potassium hydroxide**

Oral LD50 273 mg/kg (rat)

**- Primary irritant effect:****- on the skin:** Caustic effect on skin and mucous membranes.**- on the eye:** Strong caustic effect.**- Sensitization:** No sensitizing effects known.**- Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**12 Ecological information**

- **Information about elimination (persistence and degradability):** Moderately /partly biodegradable

(Contd. on page 5)



**Safety Data Sheet**  
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Revision: 04.12.2009

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(Contd. of page 4)

**13 Disposal considerations**

- **Product:**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

07 06 99 | wastes not otherwise specified

- **Uncleaned packaging:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**14 Transport information**

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:**

8 (C9) Corrosive substances.

- **Danger code (Kemler):** 80

- **UN-Number:** 1760

- **Packaging group:** III

- **Hazard label:** 8

- **Description of goods:** 1760 CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)

- **Limited quantities (LQ)** LQ22

- **Transport category** 2

- **Tunnel restriction code** E

- **Maritime transport IMDG:**



- **IMDG Class:** 8

- **UN Number:** 1760

- **Label** 8

- **Packaging group:** III

- **EMS Number:** F-A,S-B

- **Marine pollutant:** No

- **Proper shipping name:** CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8

- **UN/ID Number:** 1760

- **Label** 8

- **Packaging group:** III

- **Proper shipping name:** CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)

(Contd. on page 6)



**BUEHLER**

Page 6/6

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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(Contd. of page 5)

## 15 Regulatory information

**- Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

**- Code letter and hazard designation of product:**



C Corrosive

**- Risk phrases:**

34 Causes burns.

**- Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**- Relevant R-phrases**

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

22 Harmful if swallowed.

35 Causes severe burns.

36 Irritating to eyes.

36/38 Irritating to eyes and skin.

38 Irritating to skin.

41 Risk of serious damage to eyes.

50 Very toxic to aquatic organisms.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**- Training hints**

Further information on the safe application of metal working fluids are to be found in:

Metal working fluids - health and safety in the workplace (<http://www.hse.gov.uk/metalworking/index.htm>)

**- Department issuing MSDS:** Bühler GmbH, Düsseldorf