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Replacing version dated / version: 05.08.2016 / 0007  
Valid from: 23.11.2017  
PDF print date: 28.11.2017  
Engine and parts cleaner 5 l  
Art.: 22193

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**Engine and parts cleaner 5 l**  
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#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Vehicle cleansing

Sector of use [SU]:

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC 0 - Other

Process category [PROC]:

PROC 7 - Industrial spraying

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC99 - Not required.

Uses advised against:

No information available at present.

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

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Berner Montaje y Fijación, S.L. P.I. "La Rosa VI", C/ Albert Berner, 2, 18330 Chauchina - Granada, Spain  
Phone: +34 90 21 03 504, Fax: +34 90 21 13 190  
berner-spain@berner.es, www.berner.es

Details of the supplier of the safety data sheet see section 16 of this safety data sheet.

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

Emergency information services / official advisory body:

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Telephone number of the company in case of emergencies:

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+49 (0) 700 / 24 112 112 (BRC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Met. Corr.	1	H290-May be corrosive to metals.

### 2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

H319-Causes serious eye irritation. H315-Causes skin irritation. H290-May be corrosive to metals.

P280-Wear protective gloves and eye protection / face protection.

P314-Get medical advice / attention if you feel unwell. P390-Absorb spillage to prevent material damage.

### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

Note pH value

Hazardous to drinking water, on escape of even small quantities.

High pH-value can be harmful to water.

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

n.a.

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### 3.2 Mixture

<b>Isotridecanol, ethoxylated</b>	
<b>Registration number (REACH)</b>	---
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	---
<b>CAS</b>	69011-36-5
<b>content %</b>	3-<5
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Acute Tox. 4, H302 Eye Dam. 1, H318

<b>Potassium hydroxide</b>	
<b>Registration number (REACH)</b>	01-2119487136-33-XXXX
<b>Index</b>	019-002-00-8
<b>EINECS, ELINCS, NLP</b>	215-181-3
<b>CAS</b>	1310-58-3
<b>content %</b>	0,5-<2
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Skin Corr. 1A, H314 Acute Tox. 4, H302 Met. Corr. 1, H290 Eye Dam. 1, H318

<b>Trisodium nitrilotriacetate</b>	
<b>Registration number (REACH)</b>	---
<b>Index</b>	607-620-00-6
<b>EINECS, ELINCS, NLP</b>	225-768-6
<b>CAS</b>	5064-31-3
<b>content %</b>	0,1-<1
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Acute Tox. 4, H302 Eye Irrit. 2, H319 Carc. 2, H351

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

#### Eye contact

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Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

### Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

### 4.3 Indication of any immediate medical attention and special treatment needed

n.c.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Adapt to the nature and extent of fire.

Water jet spray/foam/CO2/dry extinguisher

#### Unsuitable extinguishing media

High volume water jet

### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Oxides of phosphorus

Toxic pyrolysis products.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Alkali-resistant protection clothing.

Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

### 6.3 Methods and material for containment and cleaning up

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Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.  
 Diluting with water is possible.  
 Neutralising is possible (only from a specialist).  
 Flush residue using copious water.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

### SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

#### 7.1 Precautions for safe handling

##### 7.1.1 General recommendations

Ensure good ventilation.  
 Avoid contact with eyes or skin.  
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
 Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

##### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Do not use alkali sensitive materials.  
 Alkali-resistant floor necessary.  
 Store at room temperature.

#### 7.3 Specific end use(s)

No information available at present.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Chemical Name	Potassium hydroxide	Content %: 0,5-<2
WEL-TWA: ---	WEL-STEL: 2 mg/m <sup>3</sup>	---
Monitoring procedures:	ISO 15202 (Determination of metals and metalloids in airborne particulate matter by inductive coupled plasma emission spectrometry) - 2000(Part 1), 2001(Part 2), 2004 (Part 3) DFG (E), DFG (D) (Alkali metal hydroxides and alkali earth hydroxides) - 2001, 1998 - EU project BC/CEN/ENTR/000/2002-16 card 44-2 (2004) OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres) - 2002 - EU project BC/CEN/ENTR/000/2002-16 card 44-5 (2004)	

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- NIOSH 7401 (Alkaline dusts) - 1994

BMGV: ---

Other information: ---

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

**Potassium hydroxide**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	

**Trisodium nitrilotriacetate**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,93	mg/l	
	Environment - marine		PNEC	0,093	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,915	mg/l	
	Environment - sewage treatment plant		PNEC	540	mg/l	
	Environment - sediment, freshwater		PNEC	3,64	mg/kg	
	Environment - sediment, marine		PNEC	0,364	mg/kg	
	Environment - soil		PNEC	0,182	mg/kg	
	Environment - oral (animal feed)		PNEC	0,2	mg/kg	
Consumer	Human - inhalation	Short term, local effects	DNEL	1,75	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	1,75	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,5	mg/kg bw/d	

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Workers / employees	Human - inhalation	Short term, local effects	DNEL	5,25	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	5,25	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	3,5	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3,5	mg/m3	

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Use alkali resistant protective gloves (EN 374).

Recommended

Protective nitrile gloves (EN 374)

Minimum layer thickness in mm:

0,4

Permeation time (penetration time) in minutes:

> 480

The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Alkali-resistant protection clothing (EN 13034)

Respiratory protection:

Normally not necessary.

Thermal hazards:

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If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellow
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	11,9 (50 g/l, 20°C)
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	n.a.
Upper explosive limit:	n.a.
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,059 g/cm <sup>3</sup> (20°C, DIN 51757)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	No
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive.
Oxidising properties:	No

### 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined



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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No decomposition if used as intended.

### 10.4 Conditions to avoid

None known

### 10.5 Incompatible materials

Avoid contact with alkali sensitive materials.

Avoid contact with strong acids.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

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Other information:						Classification according to calculation procedure.
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<b>Isotridecanol, ethoxylated</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	500-2000	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Risk of serious damage to eyes.
Serious eye damage/irritation:		>10	%		OECD 437 (Bovine Corneal Opacity + Permeability Test for Identif. Ocular Corros. + Severe Irritants)	Eye Dam. 1

<b>Potassium hydroxide</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	333-388	mg/kg	Rat	OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)	1 week observation
Respiratory or skin sensitisation:				Guinea pig		Not sensitising
Germ cell mutagenicity:					in vivo	Negative

<b>Trisodium nitrilotriacetate</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1740	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>10000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>5	mg/l/4 h			References, Aerosol



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12.2. Persistence and degradability:						The surfactant(s) contained in this mixture complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
12.3. Bioaccumulative potential:						n.d.a.
12.4. Mobility in soil:						n.d.a.
12.5. Results of PBT and vPvB assessment						n.d.a.
12.6. Other adverse effects:						n.d.a.
Other information:						According to the recipe, contains no AOX.

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Isotridecanol, ethoxylated							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>1	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	References
12.1. Toxicity to fish:	LC50	96h	>1-10	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	>1-10	mg/l			
12.1. Toxicity to algae:	EC50	72h	>1-10	mg/l			
12.2. Persistence and degradability:		28d	>60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
Toxicity to bacteria:	EC10	17h	>10000	mg/l	activated sludge		
Other information:	COD		2100	mg/g			

Potassium hydroxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	80	mg/l	Gambusia affinis		
12.1. Toxicity to fish:	LC50	24h	165	mg/l	Poecilia reticulata		
12.2. Persistence and degradability:							Not relevant for inorganic substances.
Toxicity to bacteria:	EC50	15min	22	mg/l	Photobacterium phosphoreum		

Trisodium nitrilotriacetate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	98	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Pimephales promelas		References
12.1. Toxicity to daphnia:	EC50	96h	98	mg/l	Gammarus sp.		References
12.1. Toxicity to algae:	EC50	72h	>91,5	mg/l	Scenedesmus subspicatus		

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12.2. Persistence and degradability:		28d	90-100	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
12.2. Persistence and degradability:		28d	>70	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	
12.3. Bioaccumulative potential:	BCF	96h	<3		Brachydanio rerio		
12.3. Bioaccumulative potential:	Log Pow		-2,62				Bioaccumulation is unlikely (LogPow < 1).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	8h	3200-5600	mg/l	Pseudomonas fluorescens		References
Water solubility:			660	g/l			Soluble20°C

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)  
 20 01 29 detergents containing hazardous substances

Recommendation:

- Sewage disposal shall be discouraged.
- Pay attention to local and national official regulations.
- Neutralisation possible by an expert
- E.g. dispose at suitable refuse site.
- E.g. suitable incineration plant.
- Do not dispose of with household waste.

#### For contaminated packing material

- Pay attention to local and national official regulations.
- Empty container completely.
- Untampered packaging can be recycled.
- Dispose of packaging that cannot be cleaned in the same manner as the substance.

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Recommended cleaner:  
 Water

## SECTION 14: Transport information

### General statements


14.1. UN number: 1719

#### Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:  
 UN 1719 CAUSTIC ALKALI LIQUID, N.O.S (POTASSIUM HYDROXIDE, TETRASODIUM-N,N-BIS(CARBOXYLATOMETHYL)-L-GLUTAMATE) 


14.3. Transport hazard class(es): 8  
 14.4. Packing group: III  
 Classification code: C5  
 LQ: 5 L  
 14.5. Environmental hazards: Not applicable  
 Tunnel restriction code: E

#### Transport by sea (IMDG-code)

14.2. UN proper shipping name:  
 CAUSTIC ALKALI LIQUID, N.O.S (POTASSIUM HYDROXIDE, TETRASODIUM-N,N-BIS(CARBOXYLAT OMETHYL)-L-GLUTAMATE) 

14.3. Transport hazard class(es): 8  
 14.4. Packing group: III  
 EmS: F-A, S-B  
 Marine Pollutant: n.a  
 14.5. Environmental hazards: Not applicable

#### Transport by air (IATA)

14.2. UN proper shipping name:  
 Caustic alkali liquid, n.o.s (POTASSIUM HYDROXIDE, TETRASODIUM-N,N-BIS(CARBOXYLAT OMETHYL)-L-GLUTAMATE) 

14.3. Transport hazard class(es): 8  
 14.4. Packing group: III  
 14.5. Environmental hazards: Not applicable

#### 14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.  
 All persons involved in transporting must observe safety regulations.  
 Precautions must be taken to prevent damage.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.  
 Minimum amount regulations have not been taken into account.  
 Danger code and packing code on request.  
 Comply with special provisions.

## SECTION 15: Regulatory information

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Observe restrictions:  
 Comply with national regulations/laws governing maternity protection and the protection of young people at work!  
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 0 g/l

#### REGULATION (EC) No 648/2004

less than 5 %  
 non-ionic surfactants  
 phosphates  
 NTA (nitrilotriacetic acid) and salts thereof  
 anionic surfactants

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 4, 10, 15  
 Employee training in handling dangerous goods is required.  
 These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Met. Corr. 1, H290	Classification based on test data.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).  
 H314 Causes severe skin burns and eye damage.  
 H290 May be corrosive to metals.  
 H302 Harmful if swallowed.  
 H318 Causes serious eye damage.



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H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

Eye Irrit. — Eye irritation

Skin Irrit. — Skin irritation

Met. Corr. — Substance or mixture corrosive to metals

Acute Tox. — Acute toxicity - oral

Eye Dam. — Serious eye damage

Skin Corr. — Skin corrosion

Carc. — Carcinogenicity

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Any abbreviations and acronyms used in this document:

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AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ERC Environmental Release Categories

ES Exposure scenario

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etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill

LCLo lowest published lethal concentration

LD Lethal Dose of a chemical

LD50 Lethal Dose, 50% kill

LDLo Lethal Dose Low

LOAEL Lowest Observed Adverse Effect Level

LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicable

n.av. not available

n.c. not checked

n.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level

NOEC No Observed Effect Concentration

NOEL No Observed Effect Level

ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon

PBT persistent, bioaccumulative and toxic

PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration

POCP Photochemical ozone creation potential

ppm parts per million

PROC Process category

PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

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RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.