Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

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

· **1.1 Product identifier**
· Trade name: **Mold remover**

· Article number: 10898
· **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
· Application of the substance / the mixture Biocide

· **1.3 Details of the supplier of the safety data sheet**
· Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH Tel. +49(0)911-642960
Lechstrasse 28 Fax. +49(0)911-644456
D 90451 Nürnberg e-mail info@akemi.de

· Further information obtainable from: Laboratory
· **1.4 Emergency telephone number:** Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER

* **SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008


GHS05 corrosion

Met. Corr.1	H290	May be corrosive to metals.
Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.


GHS09 environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

· **2.2 Label elements**
· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
· Hazard pictograms


GHS05 GHS09

· Signal word Danger

· Hazard-determining components of labelling: sodium hypochlorite, solution
· Hazard statements H290 May be corrosive to metals.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 1)

H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P406	Store in a corrosion resistant container / container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information: EUH031 Contact with acids liberates toxic gas.
To avoid risks to human health and the environment, comply with the instructions for use.

· **2.3 Other hazards**
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

*
SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 7681-52-9 EINECS: 231-668-3 Index number: 017-011-00-1 Reg.nr.: 01-2119488154-34-xxxx	sodium hypochlorite, solution Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; STOT SE 3, H335	1-5%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6 Reg.nr.: 01-2119457892-27	sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314 Acute Tox. 4, H302	<1%

· Regulation (EC) No 648/2004 on detergents / Labelling for contents

chlorine-based bleaching agents	<5%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· General information: No special measures required.
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact: Generally the product does not irritate the skin.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 2)

· After swallowing: Rinse out mouth and then drink plenty of water.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
Hydrogen chloride (HCl)

· **5.3 Advice for firefighters**

· Protective equipment: Wear fully protective suit.
Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Not required.

· **6.2 Environmental precautions:** Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· **6.4 Reference to other sections** No dangerous substances are released.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Do not seal receptacles gas-tight.
No special measures required.

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

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

· Storage:

· Requirements to be met by storerooms and receptacles: No special requirements.

· Information about storage in one common storage facility: Store away from metals.

· Further information about storage conditions: Store receptacle in a well ventilated area.
Keep container tightly sealed.

· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 3)

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:	
1310-73-2 sodium hydroxide	
WEL	Short-term value: 2 mg/m³

· DNELs

1310-73-2 sodium hydroxide		
Oral	DNEL (Langzeit-wiederholt)	2.3 mg/kg bw/day (ARB)
Dermal	DNEL (Langzeit-wiederholt)	11,718 mg/kg bw/day (ARB)
		11,718 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	1 mg/m³ Air (ARB)
		1 mg/m³ Air (BEV)
	DNEL (Langzeit-wiederholt)	1-2.1 mg/m³ Air (ARB)
		5.7 mg/m³ Air (BEV)

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

· **8.2 Exposure controls**
· Personal protective equipment:
· General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.

· Respiratory protection: Filter B
· Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Skin protection agent recommendation for preventive skin shelter without use of protective gloves:
STOKODERM (http://www.stoko.com)
Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (http://www.stoko.com)
Skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (http://www.stoko.com)
Skin protection agent recommendation for skin aftercare:
STOKO VITAN (http://www.stoko.com)
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times´ data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses of the company KCL GmbH in compliance with EN374.
This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: http://www.kcl.de).

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 4)

· Material of gloves
Butyl rubber, BR
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)
Chloroprene rubber, CR
Natural rubber, NR
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
Value for the permeation: Level ≤ 6, 480 min
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:
Butyl rubber, BR
Butoject (KCL, Art_No. 897, 898)
Nitrile rubber, NBR
Camatril (KCL, Art_No. 730, 731, 732, 733)
Dermatril (Art_No. 740, 741, 742)
Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
Chloroprene rubber, CR
Camapren (KCL, Art_No. 720, 722, 726)
Natural rubber, NR
Combi-Latex (KCL, Art_No. 395)

· As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR
Camatril (KCL, 730, 731, 732, 733)
Dermatril (KCL, Art_No. 740, 741, 742)

· Not suitable are gloves made of the following materials:
Leather gloves
Strong material gloves

· Eye protection:
Goggles recommended during refilling

· Body protection:
Protective work clothing

*
SECTION 9: Physical and chemical properties

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

· General Information

· Appearance:

Form:	Fluid
Colour:	Yellowish

· Odour: Chlorine-like

· pH-value at 20 °C: 11.5

· Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C

· Flash point: Not applicable.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 5)

Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	1.07 g/cm³
· Solubility in / Miscibility with water:	Fully miscible.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C:	11 s (DIN 53211/4)
· Solvent content:	
Organic solvents:	0.0 %
Water:	94.2 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with acids releasing chlorine.
Reacts with certain metals.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl)
Chlorine compounds

*

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)		
Oral	LD50	>22,449 mg/kg (rat)

7681-52-9 sodium hypochlorite, solution		
Oral	LD50	>1,100 mg/kg (rat)
Dermal	LD50	>20,000 mg/kg (rabbit)
Inhalative	LC50/1h	>10.5 mg/l (rat)
1310-73-2 sodium hydroxide		
Oral	LD50	2,000 mg/kg (rat)
	LC50/48h	145 mg/l (poecilia reticulata)

· Primary irritant effect:
· Skin corrosion/irritation Causes severe skin burns and eye damage.
· Serious eye damage/irritation Causes serious eye damage.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity Based on available data, the classification criteria are not met.
· STOT-single exposure Based on available data, the classification criteria are not met.
· STOT-repeated exposure Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 6)

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

SECTION 12: Ecological information

· **12.1 Toxicity**

· Aquatic toxicity:	
7681-52-9 sodium hypochlorite, solution	
EC50/48h	0.141 mg/l (daphnia magna)
	0.026 mg/l (piscis)
EC50/48h	0.141 mg/l (daphnia magna)
LC50/96h	0.03-0.6 mg/l (piscis)
1310-73-2 sodium hydroxide	
EC50/24h	76 mg/l (daphnia magna)
LC50/24h	145 mg/l (poecilia reticulata)
EC50/15min	22 mg/l (Photobac. phosphoreum)
EC50/48h	40.4 mg/l (daphnia magna)
LC50/96h	196 mg/l (piscis)
	125 mg/l (Gambusia affinis)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· Additional ecological information:
· General notes: Do not allow product to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
· **12.5 Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

*
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· Recommendation Must be specially treated adhering to official regulations.
Smaller quantities can be disposed of with household waste.

· European waste catalogue	
20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 29*	detergents containing hazardous substances

· 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.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 7)

* **SECTION 14: Transport information**

· **14.1 UN-Number**	
· ADR, IMDG, IATA	UN1719
· **14.2 UN proper shipping name**	
· ADR	1719 CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, HYPOCHLORITE SOLUTION), ENVIRONMENTALLY HAZARDOUS
· IMDG	CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, HYPOCHLORITE SOLUTION), MARINE POLLUTANT
· IATA	CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, HYPOCHLORITE SOLUTION)
· **14.3 Transport hazard class(es)**	
· ADR	
· Class	8 (C5) Corrosive substances.
· Label	8
· IMDG	
· Class	8 Corrosive substances.
· Label	8
· IATA	
· Class	8 Corrosive substances.
· Label	8
· **14.4 Packing group**	
· ADR, IMDG, IATA	III
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances:
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· Stowage Category	A
· Segregation Code	SG22 Stow "away from" ammonium salts SG35 Stow "separated from" acids.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 8)

· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1719 CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, HYPOCHLORITE SOLUTION), 8, III, ENVIRONMENTALLY HAZARDOUS

*
SECTION 15: Regulatory information

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

· Directive 2012/18/EU	
· Named dangerous substances - ANNEX I	None of the ingredients is listed.
· Seveso category	E1 Hazardous to the Aquatic Environment
· Qualifying quantity (tonnes) for the application of lower-tier requirements	200 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements	500 t
· REGULATION (EC) No 1907/2006 ANNEX XVII	Conditions of restriction: 3
· National regulations:	
· Information about limitation of use:	Employment restrictions concerning juveniles must be observed.
· Waterhazard class:	Water hazard class 1 (Self-assessment): slightly hazardous for water.
· VOC EU	0.0 g/l
· **15.2 Chemical safety assessment:**	A Chemical Safety Assessment has not been carried out.

*
SECTION 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 phrases	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
· Department issuing SDS:	Laboratory
· Contact:	Dieter Zimmermann
· Abbreviations and acronyms:	RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2019 Version number 5 Revision: 08.04.2019

Trade name: Mold remover

(Contd. of page 9)

ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· * Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC