

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.04.2023

Version number 10 (replaces version 9)

Revision: 20.04.2023

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

1.1 Product identifier

- Trade name: **Algae and Mildew Remover Power**
- Article number: 10825, 10832, 10833, 10997, 10998, 10882, 10883
- UFI: PUJ4-A00V-900V-MM4Q

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

Cleaning agent/ Cleaner
Biocide

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
- Tel. +49(0)911-642960
Fax. +49(0)911-644456
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.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Met. Corr.1 H290 May be corrosive to metals.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Dam. 1 H318 Causes serious eye damage.
- Aquatic Acute 1 H400 Very toxic to aquatic life.
- Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS05 GHS09

Signal word

Danger

Hazard-determining components of labelling:

Hazard statements

sodium hypochlorite, solution
H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H410 Very 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 carefully and follow all instructions.

P260 Do not breathe mist/vapours/spray.

P273 Avoid release to the environment.

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P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
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.· Determination of endocrine-disrupting properties

For information on endocrine disrupting properties see section 11.

SECTION 3: Composition/information on ingredients· **3.2 Mixtures**· Description: Mixture: consisting of the following components.· 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 (M=10); Aquatic Chronic 1, H410 (M=1) STOT SE 3, H335 EUH031 Specific concentration limit: EUH031: C ≥ 5 %	1-5%
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· 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: Immediately remove any clothing soiled by the product.· After inhalation: Supply fresh air; consult doctor in case of complaints.· After skin contact: Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.· 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.

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· **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:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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).

Ensure adequate ventilation.

· **6.4 Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Do not seal receptacles gas-tight.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **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:**

Store in a cool location.

· **Information about storage in one common storage facility:**

Do not store together with acids.

Store away from metals.

· **Further information about storage conditions:**

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Protect from frost.

Keep container tightly sealed.

· **Storage class:**

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· 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.

· **8.2 Exposure controls**

· Appropriate engineering controls No further data; see section 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Filter B

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.

· Hand protection

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 analyses 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>).

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.



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

· Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

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- 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:
 - 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)
 - Butyl rubber, BR
 - Butoject (KCL, Art_No. 897, 898)
 - As protection from splashes gloves made of the following materials are suitable:
 - Nitrile rubber, NBR
 - Camatril (KCL, 730, 731, 732, 733)
 - Butyl rubber, BR
 - Butoject (KCL, Art_No. 897, 898)
 - Not suitable are gloves made of the following materials:
 - Leather gloves
 - Strong material gloves
 - Eye/face protection
 Tightly sealed goggles
 - Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
- Colour: Yellowish
- Odour: Chlorine-like
- Odour threshold: Not determined.
- Melting point/freezing point: 0 °C
- Boiling point or initial boiling point and boiling range 100 °C
- Flammability Not applicable.
- Lower and upper explosion limit
- Lower: Not determined.
- Upper: Not determined.
- Flash point: Not applicable.
- Decomposition temperature: Not determined.
- pH at 20 °C 12-13
- Viscosity:
- Kinematic viscosity Not determined.

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· <u>Dynamic:</u>	Not determined.
· <u>Solubility</u>	
· <u>water:</u>	Fully miscible.
· <u>Partition coefficient n-octanol/water (log value)</u>	Not determined.
· <u>Vapour pressure at 20 °C:</u>	23 hPa
· <u>Density and/or relative density</u>	
· <u>Density at 20 °C:</u>	1.07-1.1 g/cm³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.

· 9.2 Other information

· <u>Appearance:</u>	
· <u>Form:</u>	Fluid
· <u>Important information on protection of health and environment, and on safety.</u>	
· <u>Ignition temperature:</u>	Product is not selfigniting.
· <u>Explosive properties:</u>	Product does not present an explosion hazard.
· <u>Solvent content:</u>	
· <u>Water:</u>	95.1 %
· <u>Solids content:</u>	0.0 %
· <u>Molecular weight</u>	18.02 g/mol
· <u>Change in condition</u>	
· <u>Evaporation rate</u>	Not determined.

· Information with regard to physical hazard classes

· <u>Explosives</u>	Void
· <u>Flammable gases</u>	Void
· <u>Aerosols</u>	Void
· <u>Oxidising gases</u>	Void
· <u>Gases under pressure</u>	Void
· <u>Flammable liquids</u>	Void
· <u>Flammable solids</u>	Void
· <u>Self-reactive substances and mixtures</u>	Void
· <u>Pyrophoric liquids</u>	Void
· <u>Pyrophoric solids</u>	Void
· <u>Self-heating substances and mixtures</u>	Void
· <u>Substances and mixtures, which emit flammable gases in contact with water</u>	
· <u>Oxidising liquids</u>	Void
· <u>Oxidising solids</u>	Void
· <u>Organic peroxides</u>	Void
· <u>Corrosive to metals</u>	May be corrosive to metals.
· <u>Desensitised explosives</u>	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
· 10.2 Chemical stability	
· <u>Thermal decomposition / conditions to be avoided:</u>	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.

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- **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 hazard classes as defined in Regulation (EC) No 1272/2008

- Acute toxicity Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

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)

- Skin corrosion/irritation Causes skin irritation.
- Serious eye damage/irritation Causes serious eye damage.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- 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.
- Aspiration hazard Based on available data, the classification criteria are not met.

· 11.2 Information on other hazards

- Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity:

7681-52-9 sodium hypochlorite, solution

EC50	>3 mg/l (BES)
EC50/48h	0.141 mg/l (daphnia magna)
	0.026 mg/l (piscis)
NOEC	0.04 mg/l (piscis)
EC50/48h	0.141 mg/l (daphnia magna)
LC50/96h	0.06 mg/l (Salmo gairdneri)

· 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.

· 12.5 Results of PBT and vPvB assessment

- PBT: Not applicable.

- vPvB: Not applicable.

· 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects

- 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

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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 2 (German Regulation) (Self-assessment): hazardous for water

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.

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.

SECTION 14: Transport information**14.1 UN number or ID number**ADR, IMDG, IATA

UN1791

14.2 UN proper shipping nameADR

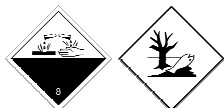
1791 HYPOCHLORITE SOLUTION, ENVIRONMENTALLY HAZARDOUS

IMDG

HYPOCHLORITE SOLUTION, MARINE POLLUTANT

IATA

HYPOCHLORITE SOLUTION

14.3 Transport hazard class(es)ADRClass

8 (C9) Corrosive substances.

Label

8

IMDGClass

8 Corrosive substances.

Label

8

IATAClass

8 Corrosive substances.

Label

8

14.4 Packing groupADR, IMDG, IATA

III

14.5 Environmental hazards:

Product contains environmentally hazardous substances:

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· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG8) Hypochlorites
· Stowage Category	B
· Segregation Code	SG20 Stow "away from" SGG1-acids
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· 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 1791 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

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· 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 Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

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.

· Department issuing SDS: Laboratory

· Date of previous version: 19.04.2023

· Version number of previous version: 9

· 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)
 ICAO: International Civil Aviation Organisation
 ADR: Accord relatif au transport international 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Met. Corr. 1: Corrosive to metals – Category 1
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 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

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