

# Safety Data Sheet

## CHLORINE DETERGENT



Safety Data Sheet dated 23/11/2022, version 4

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

#### 1.1. Product identifier

Mixture identification

Trade name:

CHLORINE DETERGENT

UFI: 92Q1-R03V-K001-FT0D

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Detergent for dishwasher.

Professional use (SU22) - Washing and cleaning products (PC35)

Uses advised against:

Different uses than recommended. Do not use in combination with other products.

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

Manufacturer:

SUTTER INDUSTRIES s.p.a. - Società con Unico Socio

15060 Borghetto Borbera (AL) Italia

Tel. +39 0143 631.1

Competent person responsible for the safety data sheet:

regulatory.affairs@sutter.it

#### 1.4. Emergency telephone number

+39 0143 631.1 mon-fri 9.00/17.00

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)



Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.



Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.



Danger, Eye Dam. 1, Causes serious eye damage.



Warning, Aquatic Acute 1, Very toxic to aquatic life.

Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

H411 Toxic to aquatic life with long lasting effects.

H400 Very toxic to aquatic life.

Precautionary statements:

P280 Wear eye 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.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local regulation.

### Special Provisions:

EUH210 Only for professional use. Safety data sheet available on request.

### Contains

POTASSIUM HYDROXIDE  
SODIUM HYPOCHLORITE

### Product contents:

phosphonates 5 - 15 %

chlorine-based bleaching agents, polycarboxylates < 5 %

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

### Other Hazards:

No other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not Applicable, the product is a mixture.

### 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

$\geq 5\%$  -  $< 7\%$  POTASSIUM HYDROXIDE

REACH No.: 01-2119487136-33, Index number: 019-002-00-8, CAS: 1310-58-3, EC: 215-181-3



2.16/1 Met. Corr. 1 H290



3.3/1 Eye Dam. 1 H318



3.2/1A Skin Corr. 1A H314



3.1/4/Oral Acute Tox. 4 H302

Specific Concentration Limits:

0,5%  $\leq$  C < 2%: Skin Irrit. 2 H315

0,5%  $\leq$  C < 2%: Eye Irrit. 2 H319

2%  $\leq$  C < 5%: Skin Corr. 1B H314

C  $\geq 5\%$ : Skin Corr. 1A H314

$\geq 1\%$  -  $< 3\%$  SODIUM HYPOCHLORITE

REACH No.: 01-2119488154-34, Index number: 017-011-00-1, CAS: 7681-52-9, EC: 231-668-3






2.16/1 Met. Corr. 1 H290



3.2/1B Skin Corr. 1B H314

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-  3.3/1 Eye Dam. 1 H318
-  4.1/A1 Aquatic Acute 1 H400 M=10.
-  4.1/C1 Aquatic Chronic 1 H410 M=1.

EUH031

Specific Concentration Limits:  
C >= 5%: EUH031

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Acute effects:

Severe skin and eye irritation for contact.

Irritation interior system if swallowed.

Any whitening effect on the skin is temporary and reversible.

Until revision date of this document, are unknown chronic effects from the mixture contact with skin, eyes, inhalation, ingestion.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

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

The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

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#### 5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).

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### SECTION 6: Accidental release measures

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

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

#### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

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

Wash with plenty of water. To converge the product in containment tanks.

#### 6.4. Reference to other sections

See also section 8 and 13

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

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

Store in area dedicated to alkaly products, keep away from acids and oxygen or peracetic acid based oxidants.

Store away from sunlight.

Store in a cool and well ventilated place.

Do not store in open or unlabeled containers.

Store away from heat sources.

Keep away from food, drink and feed.

Incompatible materials:

Acids, oxygen-based oxidants, peracetic acid, organic substances.

Store in area dedicated to alkaly products, keep away from acids and oxygen based oxidants and peracetic acid.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

#### 7.3. Specific end use(s)

None in particular, see paragraph 1.2

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## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

Until the revision date of this document, no experimental data are available for the mixture. Below, listed occupational exposure limits, if available, for the components listed in paragraph 3.2.

POTASSIUM HYDROXIDE - CAS: 1310-58-3

ACGIH - STEL: Ceiling 2 mg/m<sup>3</sup> - Notes: URT, eye, and skin irr

SODIUM HYPOCHLORITE - CAS: 7681-52-9

EU - TWA(8h): 0.5 ppm - STEL(15min): 1 ppm

### DNEL Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the DNEL exposure limits, if available, for the components listed in paragraph 3.2.

POTASSIUM HYDROXIDE - CAS: 1310-58-3

Worker Industry: 1 mg/m<sup>3</sup> - Consumer: 1 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Industry: 1 mg/m<sup>3</sup> - Consumer: 1 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, local effects

SODIUM HYPOCHLORITE - CAS: 7681-52-9

Worker Industry: 1.55 mg/m<sup>3</sup> - Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Industry: 3.1 mg/m<sup>3</sup> - Consumer: 3.1 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Short Term, systemic effects

Worker Industry: 0.5 mg/kg - Consumer: 0.5 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, local effects

Consumer: 0.26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 1.55 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

### PNEC Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the PNEC exposure limits, if available, for the components listed in paragraph 3.2.

SODIUM HYPOCHLORITE - CAS: 7681-52-9

Target: Marine water - Value: 0.000042 mg/l

Target: Fresh Water - Value: 0.00021 mg/l

Target: Microorganisms in sewage treatments - Value: 4.69 mg/l

Target: Food chain - Value: 11.1 mg/kg

### 8.2. Exposure controls

#### Eye protection:

Use close fitting safety goggles, don't use eye lens.(EN 166)

#### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton (EN 14605 in case of splashes or EN 13982 in case of dust)

#### Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (ex. EN 388 - EN 374 protection factor 6, corresponding to a breakthrough time >480 minutes).

Due to great diversity of types, observe the operating instructions of the manufacturer with respect to substances listed in paragraph 3.2.

#### Respiratory protection:

Not needed for normal use.

#### Thermal Hazards:

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The product is not flammable or explosive - see paragraph 2.1. The product contains no explosive components.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

Environmental exposure controls:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

See also section 6.2.

Appropriate engineering controls:

No further technical checks suitable for your product under normal conditions.

See also section 1.2, section 7 and Exposure Scenario - Annex I of this document.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid	Visual	--
Colour:	yellow	Visual	--
Odour:	Technical	Olfactory	Absence of fragrances
Odour threshold:	Evident	Olfactory	--
Melting point/freezing point:	Not Relevant	--	Parameter not relevant for the type of product
Boiling point or initial boiling point and boiling range:	$\geq 100$ °C	--	Estimated value on chemical / physical properties of components
Flammability:	non-flammable	--	Estimated parameter on chemical / physical properties of components.
Lower and upper explosion limit:	Not Relevant	--	Parameter not relevant for the type of product
Flash point:	$> 60$ °C	--	Estimated value on chemical / physical properties of components
Auto-ignition temperature:	Not Relevant	--	Parameter not relevant for the type of product
Decomposition temperature:	Not Relevant	--	Parameter not relevant for the type of product
pH:	$> 13,0$	--	Estimated value on chemical / physical properties of components
Kinematic viscosity:	Not Relevant	--	Parameter not relevant. Not viscous mixture.
Solubility in water:	Total	--	Internal tests
Solubility in oil:	None	--	Internal tests
Partition coefficient n-octanol/water (log value):	$< 1000$	--	Value estimated based on the solubility of the mixture.
Vapour pressure:	Not Relevant	--	Parameter not relevant for the type of product
Density and/or relative density:	1.164 g/ml	Instrumental control	--
Relative vapour density:	Not Relevant	--	Parameter not relevant for the type of product
Particle characteristics:			
Particle size (average and range)	Not Relevant	--	Parameter not relevant for the type of product

- 9.2. Other information  
No other relevant information

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## **SECTION 10: Stability and reactivity**

- 10.1. Reactivity  
Do not use in combination with other products.  
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
- 10.2. Chemical stability  
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
- 10.3. Possibility of hazardous reactions  
In normal conditions no dangerous reactions of the mixture  
Store in area dedicated to alkaly products, keep away from acids and oxygen or peracetic acid based oxidants.  
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.  
See also scetion 7.2.
- 10.4. Conditions to avoid  
Different uses than recommended. Do not use in combination with other products. See also 1.2 and 7.2  
Avoid direct sunlight and exposure to heat sources.
- 10.5. Incompatible materials  
Acids, oxygen-based oxidants, peracetic acid, organic substances.  
Store in area dedicated to alkaly products, keep away from acids and oxygen based oxidants and peracetic acid.  
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.
- 10.6. Hazardous decomposition products  
Toxic gas, chlorine.  
Do not use in combination with other products.  
Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

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## **SECTION 11: Toxicological information**

- 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008  
Toxicological information of the product:  
CHLORINE DETERGENT
- a) acute toxicity  
Not classified  
Based on available data, the classification criteria are not met
  - b) skin corrosion/irritation  
The product is classified: Skin Corr. 1A H314
  - c) serious eye damage/irritation  
The product is classified: Eye Dam. 1 H318
  - d) respiratory or skin sensitisation  
Not classified  
Based on available data, the classification criteria are not met
  - e) germ cell mutagenicity  
Not classified  
Based on available data, the classification criteria are not met
  - f) carcinogenicity  
Not classified



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Based on available data, the classification criteria are not met  
g) reproductive toxicity  
Not classified

Based on available data, the classification criteria are not met  
h) STOT-single exposure  
Not classified

Based on available data, the classification criteria are not met  
i) STOT-repeated exposure  
Not classified

Based on available data, the classification criteria are not met  
j) aspiration hazard  
Not classified

Based on available data, the classification criteria are not met  
Toxicological information of the main substances found in the product:

Below are reported, if available, the toxicological information of the components listed in paragraph 3.2.

POTASSIUM HYDROXIDE - CAS: 1310-58-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 333 mg/kg - Source: OECD 401

b) skin corrosion/irritation:

Test: Skin Corrosive Positive

c) serious eye damage/irritation:

Test: Eye Corrosive Positive

SODIUM HYPOCHLORITE - CAS: 7681-52-9

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 1100 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 10000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 10.5 mg/l - Duration: 1h

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Positive

d) respiratory or skin sensitisation:

Test: Skin or Resp. Sensitization Negative

f) carcinogenicity:

Test: NOAEL - Route: Oral - Species: Rat = 50 mg/kg

g) reproductive toxicity:

Test: NOAEL - Route: Oral - Species: Rat = 5 mg/kg

h) STOT-single exposure:

Test: STOT Sing It can irritate the respiratory tract.

#### 11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

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## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

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The product is classified: Aquatic Chronic 2 - H411; Aquatic Acute 1 - H400

POTASSIUM HYDROXIDE - CAS: 1310-58-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 80 mg/l - Duration h: 96 - Notes: Gambusia affinis



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SODIUM HYPOCHLORITE - CAS: 7681-52-9

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 0.11 mg/l - Duration h: 96

Endpoint: LC50 - Species: Fish = 0.011 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 0.011 mg/l - Duration h: 48

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish = 0.04 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 0.007 mg/l - Duration h: 672

Endpoint: NOEC - Species: Algae = 0.0021 mg/l - Duration h: 168

### 12.2. Persistence and degradability

Until the revision date of this document, are not available experimental data on the mixture. Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

Not applicable

The surfactant(s) contained in this preparation complies with the biodegradability criteria laid down in Regulation (EC) No 648/2004 on detergents. All supporting data are kept available to the competent authorities of the Member States and will be provided to those authorities if they so request or at the request of a detergent manufacturer.

### 12.3. Bioaccumulative potential

Until the revision date of this document, are not available experimental data on the mixture. Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

Not applicable

### 12.4. Mobility in soil

Until the revision date of this document, are not available experimental data on the mixture. Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

Not applicable

### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

### 12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

### 12.7. Other adverse effects

Until the revision date of this document, unknown adverse effects and symptoms towards the environment.

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## SECTION 13: Disposal considerations

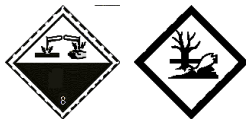
### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. Do not discharge into the ground or into drains.

See also section 6

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## SECTION 14: Transport information



### 14.1. UN number or ID number

ADR-UN Number: 1760

IATA-UN Number: 1760

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- IMDG-UN Number: 1760
- 14.2. UN proper shipping name  
ADR-Shipping Name: CORROSIVE LIQUID, N.O.S.(POTASSIUM HYDROXIDE, SODIUM HYPOCHLORITE)  
IATA-Shipping Name: CORROSIVE LIQUID, N.O.S.(POTASSIUM HYDROXIDE, SODIUM HYPOCHLORITE)  
IMDG-Shipping Name: CORROSIVE LIQUID, N.O.S.(POTASSIUM HYDROXIDE, SODIUM HYPOCHLORITE)
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 80  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8
- 14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: Yes  
IMDG-Marine pollutant: Marine Pollutant  
IMDG-EmS: F-A , S-B
- 14.6. Special precautions for user  
ADR-Subsidiary hazards: -  
ADR-S.P.: 274  
ADR-Transport category (Tunnel restriction code): E  
IATA-Passenger Aircraft: 852  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 856  
IATA-S.P.: A3 A803  
IATA-ERG: 8L  
IMDG-S.P.: 223 274  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category A SW2  
IMDG-Segregation: -
- 14.7. Maritime transport in bulk according to IMO instruments  
Not applicable

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## SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) n. 2020/878  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)

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Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: E1

15.2. Chemical safety assessment

No, for instructions on safe mangling you see Sections 7 and 8 and the exposure scenario - Annex I of this document.

A Chemical Safety Assessment has been carried out for the mixture.

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None

**SECTION 16: Other information**

Full text of phrases referred to in Section 3:

H290 May be corrosive to metals.

H318 Causes serious eye damage.

H314 Causes severe skin burns and eye damage.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

EUH031 Contact with acids liberates toxic gas.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

This safety data sheet has been completely updated in compliance to Regulation 2020/878.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure

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Skin Corr. 1A, H314	On basis of test data (pH)
Aquatic Chronic 2, H411	Calculation method
Eye Dam. 1, H318	On basis of test data (pH)
Aquatic Acute 1, H400	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EC0/10/20/50/100:	Effective concentration, for 0/10/20/50/100 percent of test population.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC0/10/20/50/100:	Lethal concentration, for 0/10/20/50/100 percent of test population.
LD0/10/20/50/100:	Lethal dose, for 0/10/20/50/100 percent of test population.
NOEC:	No Observed Effect Concentration
NOAEL(R)/N	No Observed Adverse Effect Level(Repeated)/Concentration
OAEC:	
OECD:	Organisation for Economic Co-operation and Development
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.

**Safety Data Sheet**  
**CHLORINE DETERGENT**



ANNEX I  
PROFESSIONAL PRODUCT – LAUNDRY or AUTOMATIC DISHWASH DETERGENT

<b>Title of exposure scenario</b>	
Detergent for general cleaning: Manual or machine process.	
<b>Use description</b>	
Sector Use	SU22 – Professional use
Product Category	PC35 – Washing and cleaning products (including solvent based products)
<b>Description of activities/process considered on exposure scenario.</b>	
Use the recommended dose according to water hardness and <a href="#">degree of soiling</a> , following the instructions on the label or technical data sheet.	
<b>Frequency and duration</b>	
Use phase	1 or more times a day. Duration depends on washing program.
Relevant limit values of ingredients, if available, are stated in section 8 of the SDS.	
<b>Physical appearance and concentration</b>	
Liquid or powder. To dilute.	
In section 2 of the SDS of product and on the label the classification of mixture is provided.	
Mixture classification is based on ingredients classification and on chemical/physical properties stated in section 9 of the SDS of product.	
<b>Use conditions</b>	
Room temperature /for recommended washing temperature see label or tecnica sheet.	
<b>Protezione</b>	
See section 8 of the SDS of product to more information on PPE.	Training of worker to use and maintenance of PPE is supposed.
Don't eat or drink, don't smoke.	Avoid contact with damaged skin.
No open flame.	Do not use in combination with other products
Wash hand after use.	
In case of accidental release: dilute with water and dry.	
Follow use instruction as specified on the label or on technical sheet. Use good occupational hygiene practices as specified in section 7 on the SDS.	
<b>Environmental measures</b>	
See section 6 of the SDS in case of accidental release	
See section 12 of the SDS for ecotoxicological information of mixture and dangerous ingredients.	
See section 13 of the SDS for disposal considerations.	

Note:

SDS: Safety Data Sheet

PPE: Personal Protection Equipment