



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

- 1.1 Product identifier** **KRONES colclean DI 3001**
Article number: 0903204323, 0903204326, 0903204327
- Registration number** 01-2119488154-34-XXXX
- IUPAC** Sodium hypochlorite, solution 13-16 % Cl active
- EU-INDEX** 017-011-00-1
- EINECS/ELINCS** 231-668-3
- CAS** 7681-52-9
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
- 1.2.1 Relevant uses**
 Cleaning agent and disinfectant
- 1.2.2 Uses advised against**
 None known.
- 1.3 Details of the supplier of the safety data sheet**
- Company** KIC KRONES Internationale Cooperationsgesellschaft mbH
 Böhmerwaldstraße 5
 93073 Neutraubling / GERMANY
 Phone +49 9401 70-3020
 Fax +49 9401 70-3696
 Homepage www.kic-krones.com
 E-mail kic@kic-krones.com
- Address enquiries to**
- Technical information** kic@kic-krones.com
- Safety Data Sheet** sdb@chemiebuero.de
- 1.4 Emergency telephone number**
- Advisory body** +49 (0)89-19240 (24h) (english)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture**
- Skin Corr. 1B: H314 Causes severe skin burns and eye damage.
 Eye Dam. 1: H318 Causes serious eye damage.
 Met. Corr. 1: H290 May be corrosive to metals.
 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

	The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).	
Hazard pictograms		
Signal word	DANGER	
Contains:	Sodium hypochlorite, solution 13-16 % Cl active EU-INDEX 017-011-00-1	
Hazard statements	H314 Causes severe skin burns and eye damage. H290 May be corrosive to metals. H410 Very toxic to aquatic life with long lasting effects.	
Precautionary statements	P260 Do not breathe 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. P310 Immediately call a POISON CENTER / doctor. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with local/national regulation.	
Special labelling	EUH031 Contact with acids liberates toxic gas.	
Cleaner, 648/2004/CE, contains:	disinfectants	
Biocide (528/2012/CE) contains:	13-16 g/100g Sodium hypochlorite Registration: -	

2.3 Other hazards

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a substance.

Range [%]	Substance
< 2,5	Sodium hydroxide
	CAS: 1310-73-2, EINECS/ELINCS: 215-185-5, EU-INDEX: 011-002-00-6, Reg-No.: 01-2119457892-27-XXXX
	GHS/CLP: Met. Corr. 1: H290 - Skin Corr. 1A: H314 - Eye Dam. 1: H318
10 - 25	Sodium hypochlorite
	CAS: 7681-52-9, EINECS/ELINCS: 231-668-3, EU-INDEX: 017-011-00-1, Reg-No.: 01-2119488154-34-XXXX
	GHS/CLP: Met. Corr. 1: H290 - Skin Corr. 1B: H314 - Aquatic Acute 1: H400 - STOT SE 3: H335, M = 10

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%. All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	Change soaked clothing immediately.
Inhalation	Ensure supply of fresh air. Remove the victim into fresh air and keep him calm. Get medical advice.
Skin contact	Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds. In case of contact with skin wash off immediately with soap and water.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a doctor immediately. Shield unaffected eye.
Ingestion	Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Consult a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Product is caustic.
Risk of blindness!
Cough
Irritant effects
Redness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
Extinguishing media that must not be used	Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Chlorine (Cl₂).
Hydrogen chloride (HCl).

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Wear full protective suit.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid spilling or spraying in enclosed areas.
Avoid contact with eyes and skin. Use personal protective equipment.

Do not eat, drink, smoke or take drugs at work.
Remove soiled or soaked clothing immediately.
Clean skin thoroughly after work, apply skin cream.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide alkali-resistant floor.
Keep only in original container.
Do not store together with oxidizing agents.
Do not store together with acids.
Do not store with amines
Do not store with ammonium agents.
Keep container tightly closed.
Keep container in a well-ventilated place.
Keep in a cool place. Store in a dry place.
Protect from heat/overheating and from sun.
Protect from light.
Recommended storage temperature: 15-25 °C.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection
8.1 Control parameters
Ingredients with occupational exposure limits to be monitored (GB)

Substance
Sodium hypochlorite
CAS: 7681-52-9, EINECS/ELINCS: 231-668-3, EU-INDEX: 017-011-00-1, Reg-No.: 01-2119488154-34-XXXX
Long-term exposure: Chlorine (7782-50-5), EC
Short-term exposure (15-minute): 0,5 ppm, 1,5 mg/m ³
Sodium hydroxide
CAS: 1310-73-2, EINECS/ELINCS: 215-185-5, EU-INDEX: 011-002-00-6, Reg-No.: 01-2119457892-27-XXXX
Short-term exposure (15-minute): 2 mg/m ³

DNEL

Substance
Sodium hydroxide, CAS: 1310-73-2
Industrial, inhalative, Long-term - local effects: 1,0 mg/m ³ .
general population, inhalative, Long-term - local effects: 1,0 mg/m ³ .
Sodium hypochlorite, solution 13-16 % Cl active, CAS: 7681-52-9
Industrial, inhalative, Long-term - local effects: 1,55 mg/m ³ .
Industrial, dermal, Long-term - local effects: 0,5 %.
Industrial, inhalative, Long-term - systemic effects: 1,55 mg/m ³ .
Industrial, inhalative, Acute - local effects: 3,1 mg/m ³ .
Industrial, inhalative, Acute - systemic effects: 3,1 g/m ³ .
general population, oral, Long-term - systemic effects: 0,26 mg/kg.
general population, inhalative, Long-term - systemic effects: 1,55 mg/m ³ .
general population, inhalative, Long-term - local effects: 1,55 mg/m ³ .

PNEC

Substance
Sodium hydroxide, CAS: 1310-73-2
There are no PNEC values established for the substance.,
Sodium hypochlorite, solution 13-16 % Cl active, CAS: 7681-52-9
oral (food), 11,1 mg/kg.
sewage treatment plants (STP), 0,03 mg/l.
seawater, 0,000042-0,042 mg/l.
freshwater, 0,00021-0,21 mg/l.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Tightly fitting goggles. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. 0,4 mm, Nitrile rubber, >480 min (EN 374-1/-2/-3). 0,7 mm, PVC (EN 374-1/-2/-3). Rubber gloves.
Skin protection	Alkali-resistant protective clothing.
Other	Avoid contact with eyes and skin. Do not breathe vapour/spray. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	If ventilation is insufficient, wear respiratory protection. Short term: filter apparatus, filter B. (DIN EN 14387)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	yellowish
Odor	chlorine pungent
Odour threshold	No information available.
pH-value	> 11 (12 g/l, 20 °C)
pH-value [1%]	No information available.
Boiling point [°C]	ca. 100
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	ca. 25 hPa
Density [g/ml]	1,21-1,26 (ISO 2811-3) (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	completely miscible
Partition coefficient [n-octanol/water]	-3,42 (20 °C)
Viscosity	2,6-4 mPas (20 °C, OECD 114)
Relative vapour density determined in air	2,5
Evaporation speed	No information available.
Melting point [°C]	-20
Autoignition temperature [°C]	not self-igniting
Decomposition temperature [°C]	ca. 40

9.2 Other information

Surface tension: 82,4 mN/m (20 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Evolution of chlorine under influence of acids.

Reactions with reducing agents.

Reactions with metals.

10.4 Conditions to avoid

Decompose easily under presence of heat, light, impurities and heavy metal cations.

Avoid temperatures above 40 °C.

Temperature: - 10°C (NaOCl*6H₂O)

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

Chlorine.

Chlorine compounds.

Oxygen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Substance
Sodium hydroxide, CAS: 1310-73-2
LD50, oral, 325 mg/kg bw.
Sodium hypochlorite, solution 13-16 % Cl active, CAS: 7681-52-9
LD50, dermal, Rabbit: > 5000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.
LC50, inhalative, Rat: > 10,5 mg/l/1h.
NOAEL, oral, Rat: 50 mg/kg/90d.

Serious eye damage/irritation	Risk of serious damage to eyes. Calculation method
Skin corrosion/irritation	Product is caustic. Calculation method
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — single exposure	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled.
Mutagenicity	Based on the available information, the classification criteria are not fulfilled.
Reproduction toxicity	Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity	Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard	Based on the available information, the classification criteria are not fulfilled.
General remarks	If swallowed - risk of perforation! Inhalation causes persistent cough, difficulty in breathing Irritates the mucous membrane. May cause irritation of respiratory organs. The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Sodium hydroxide, CAS: 1310-73-2
LC50, (48h), Leuciscus idus: 189 mg/l.
LC50, (96h), Gambusia affinis: < 180 mg/l.
EC50, (48h), Daphnia sp.: 100 mg/l.
Sodium hypochlorite, solution 13-16 % Cl active, CAS: 7681-52-9
LC50, (96h), fish: 0,01-0,1 mg/l.
EC50, (48h), Daphnia magna: 0,01-0,1 mg/l.
NOEC, Algae: 0,0021 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	The product is an alkaline solution. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.
Biological degradability	The product can be degraded by abiotic, e.g. chemical or photolytic processes.

12.3 Bioaccumulative potentialHenry-Konstante: 0,076 Pascal.m³/mol, 20 °C**12.4 Mobility in soil**

Soil Organic Carbon-Water Partitioning Coefficient (Koc): 1,12

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Other adverse effects

Harmful effect due to pH shift.

Do not discharge product unmonitored into the environment or into the drainage.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

060205*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended)

150110*

SECTION 14: Transport information**14.1 UN number**


Transport by land according to
ADR/RID 1791

Inland navigation (ADN) 1791


Marine transport in accordance with
IMDG 1791


Air transport in accordance with IATA 1791

14.2 UN proper shipping name

Transport by land according to ADR/RID HYPOCHLORITE SOLUTION
 - Classification Code C9
 - Label 
 - ADR LQ 1 I
 - ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 2 (E)

Inland navigation (ADN) HYPOCHLORITE SOLUTION
 - Classification Code C9
 - Label 

Marine transport in accordance with IMDG Hypochlorite, solution
 - EMS F-A, S-B
 - Label 
 - IMDG LQ 1 I

Air transport in accordance with IATA Hypochlorite, solution
 - Label 

14.3 Transport hazard class(es)

Transport by land according to ADR/RID 8

Inland navigation (ADN) 8

Marine transport in accordance with IMDG 8

Air transport in accordance with IATA 8

14.4 Packing group

Transport by land according to ADR/RID II

Inland navigation (ADN) II

Marine transport in accordance with IMDG II

Air transport in accordance with IATA II

14.5 Environmental hazards

Transport by land according to ADR/RID yes

Inland navigation (ADN) yes

Marine transport in accordance with IMDG MARINE POLLUTANT

Air transport in accordance with IATA yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

No information available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EEC-REGULATIONS 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2017).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people Observe employment restrictions for young people.
Observe employment restrictions for mothers-to-be and nursing mothers.

- VOC (2010/75/CE) not applicable

15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information**16.1 Hazard statements (SECTION 03)**

H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H314 Causes severe skin burns and eye damage.
H290 May be corrosive to metals.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 ATE = acute toxicity estimate
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 LC0 = lethal concentration, 0%
 LOAEL = lowest-observed-adverse-effect level
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 STP = Sewage Treatment Plant
 TLV@TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.3 Other information**Classification procedure**

Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (Calculation method)
 Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
 Met. Corr. 1: H290 May be corrosive to metals. (Calculation method)
 Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)
 Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none



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