


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

1.1 Product identifier	KRONES colclean DI 8001
	Article number: 0903204329, 0903204376, 0903204377
IUPAC	Hydrochloric acid 8-9%
Registration number	01-2119484862-27-XXXX
EU-INDEX	017-002-01-X
EINECS/ELINCS	231-595-7
CAS	7647-01-0
1.2 Relevant identified uses of the substance or mixture and uses advised against	
1.2.1 Relevant uses	Production of chlorine dioxide
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	Met. Corr. 1: H290 May be corrosive to metals.
2.2 Label elements	The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).
Hazard pictograms	
Signal word	WARNING
Hazard statements	H290 May be corrosive to metals.
Precautionary statements	P234 Keep only in original container. P390 Absorb spillage to prevent material damage.
2.3 Other hazards	
Physico-chemical hazards	May be corrosive to metals.
Environmental hazards	Does not contain any PBT or vPvB substances.
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
5 - <10	Hydrochloric acid
	CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX
	GHS/CLP: Skin Corr. 1B: H314 - STOT SE 3: H335 - Met. Corr. 1: H290

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	Take off contaminated clothing and wash before reuse.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
Skin contact	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	foam, dry powder, water spray jet, carbon dioxide
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.
Hydrogen chloride (HCl).

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
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.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. acid binder).
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.
The normal safety precautions for handling chemicals must be observed.
Avoid contact with eyes and skin. Use personal protective equipment.

Do not eat, drink, smoke or take drugs at work.
Take off contaminated clothing and wash before reuse.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide acid-resistant floor.
Keep only in original container.
Do not store with alkalis.
Do not store together with metals.
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.

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
Hydrochloric acid
CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX
Long-term exposure: 1 ppm, 2 mg/m ³ , gas and aerosol mists
Short-term exposure (15-minute): 5 ppm, 8 mg/m ³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Hydrochloric acid
CAS: 7647-01-0, EINECS/ELINCS: 231-595-7, EU-INDEX: 017-002-01-X, Reg-No.: 01-2119484862-27-XXXX
Eight hours: 5 ppm, 8 mg/m ³
Short-term (15-minute): 10 ppm, 15 mg/m ³

DNEL

Substance
Hydrochloric acid, CAS: 7647-01-0
Industrial, inhalative, Long-term - local effects: 8 mg/m ³ .
Industrial, inhalative, Acute - local effects: 15 mg/m ³ .

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	safety glasses (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).
Skin protection	Acid-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	Breathing apparatus in the event of aerosol or mist formation. 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	colourless clear
Odor	faintly pungent
Odour threshold	No information available.
pH-value	acidic
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	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	1,04
Bulk density [kg/m³]	not applicable
Solubility in water	completely miscible
Partition coefficient [n-octanol/water]	No information available.
Viscosity	No information available.
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	< 0
Autoignition temperature [°C]	not self-igniting
Decomposition temperature [°C]	No information available.

9.2 Other information

No information available.

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

Reactions with alkalis (lyes).
Reactions with oxidizing agents.
Reactions with metals.
Reactions with acids.
Corrosive to metals.

10.4 Conditions to avoid

Sunlight
Heating (decomposition)
Sensitive to frost

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

In the event of fire: See SECTION 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Substance
Hydrochloric acid, CAS: 7647-01-0
LD50, oral, Rabbit: 900 mg/kg.
LD50, dermal, Rabbit: > 5010 mg/kg.
LC50, inhalative, Rat: 4,2 - 4,7 mg/l 1h.

Serious eye damage/irritation	No classification due to substance-specific concentration limits.
Skin corrosion/irritation	No classification due to substance-specific concentration limits.
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — single exposure	No classification due to substance-specific concentration limits.
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	Frequent persistent contact with the skin can cause skin irritation. Toxicological data of complete product are not available. 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
Hydrochloric acid, CAS: 7647-01-0
LC50, Leuciscus idus: 862 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.
Biological degradability	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Harmful effect due to pH shift.

Ecological data of complete product are not available.

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

Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

060102*

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 1789

Inland navigation (ADN) 1789


Marine transport in accordance with IMDG 1789


Air transport in accordance with IATA 1789

14.2 UN proper shipping name

Transport by land according to ADR/RID	Hydrochloric acid, solution
- Classification Code	C1
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (E)

Inland navigation (ADN)	Hydrochloric acid, solution
- Classification Code	C1
- Label	

Marine transport in accordance with IMDG	Hydrochloric acid, solution
- EMS	F-A, S-B
- Label	
- IMDG LQ	5 l

Air transport in accordance with IATA	Hydrochloric acid, solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	8
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Inland navigation (ADN)	8
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Marine transport in accordance with IMDG	8
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Air transport in accordance with IATA	8
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14.4 Packing group

Transport by land according to ADR/RID	III
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Inland navigation (ADN)	III
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Marine transport in accordance with IMDG	III
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Air transport in accordance with IATA	III
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14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

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.

- VOC (2010/75/CE) not applicable

15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

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

H290 May be corrosive to metals.
H335 May cause respiratory irritation.
H314 Causes severe skin burns and eye damage.

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**

Met. Corr. 1: H290 May be corrosive to metals. (Calculation method)

Modified position

SECTION 2 been added: Hydrochloric acid 8-9%

SECTION 7 been added: Avoid contact with eyes and skin. Use personal protective equipment.

SECTION 8 been added: 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.

SECTION 9 been added: No information available.

SECTION 9 deleted: not determined

SECTION 11 been added: No classification due to substance-specific concentration limits.

SECTION 11 been added: Based on the available information, the classification criteria are not fulfilled.

SECTION 11 deleted: not determined

SECTION 12 been added: No information available.

SECTION 12 deleted: not determined



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