

## Section 1 Identification of the substance/mixture and the company




- 1.1 Product identifier **HydroQuant<sup>®</sup> reagent Cl-2**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Use of substance Reagent solution for the determination of chlorine/ozone
- 1.3 Supplier  
WAPOTEC GmbH  
Franz-Sauer-Str. 44  
A-5020 Salzburg  
Tel: +43 662 434342-0  
Fax: +43 662 434342-3
- Contact  
Mr. G. Weiss  
Email: [office@wapotec.at](mailto:office@wapotec.at)
- 1.4 Emergency phone  
+43 662 43 43 42-0  
Office hours:  
MO - TH: 8.00 - 16.00  
FR: 8.00 - 12.00
- Toxicity information centre Vienna:**  
Phone: +43 1 406 43 43  
Available 0-24h

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## Section 2 Hazards identification

- 2.1 Hazard classification of substance or mixture  
 according to Directive (EC) N° 1272/2008
- Solids or alloys corrosive to metals cat. 1**  
**Skin irritation cat. 2**  
**Serious eye irritation cat. 2**
- H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
-  According to Directive (EC) N° 1999/45
- Xi (irritant)
- R 21/22 Harmful in contact with skin and if swallowed.  
R 35 Causes severe corrosion.  
R 36/38 Irritating to eyes and skin.
- 2.2 Identification labeling  
 according to Directive (EC) 1272/2008



GHS05 corrosive

**Attention (warning)**

H290

May be corrosive to metals.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

P280

Wear protective gloves/ eye protection.

P302 + P352

IF ON SKIN: Wash with plenty of water and soap.

P305 + P351 +

IF IN EYES: Rinse continuously with water for several minutes Remove contact lenses if present and easy to do. Continue rinsing

P338

P309 + P310

IF exposed or if you feel unwell: Call a physician or POISON CENTER immediately

P337 + P313

If eye irritation persists: Get medical advice/attention.

P501

Dispose of contents/container to collection system.

 According to Directive (EC) N° 1999/45
**Xi**; irritant

R 21/22

Harmful in contact with skin and if swallowed.

R 35

Causes severe burns.

R36/38\*

Irritating to eyes and skin.

S 23

Do not inhale fumes/aerosols.

S 25\*

Avoid contact with eyes.

S 26

Upon contact with eyes immediately rinse thoroughly with water and consult a doctor.

S 37/39

Wear suitable protective clothing and gloves.

S 46

If swallowed, seek medical advice immediately and show this container or label.

S 60

This material and its container must be disposed of as hazardous waste.

\* Identification of packings containing 125 ml max. acc.to Directive (EC) 1272/2008

 Danger defining components for labeling

Sulphuric acid 5 – 15% (CAS: 7664-93-9)

N, N-diethylene-1.4-phenylene-diammoniumsulphate (CAS: 6283-63-2)

2.3

Other hazards

Unknown.

### Section 3 Composition/information on ingredients

#### 3.2 Mixtures

##### Chemical characteristics

Mixture of below mentioned ingredients with harmless additives.

##### Dangerous ingredients

Name	CAS # / EC # / Index #	Conc. %	Classification according to		
			Directive 67/548/ EEC*	Regulation (EC) 1272/2008*	
Sulphuric acid	7664-93-9 / 231-639-5 / 016-020-00-8	5 – 15%	C; R 35	Met. corr. 1 Skin corr. 1A Eye irrit. 1	H290 H315 H319
N, N-diethylene-1,4-phenylene-diammoniumsulphate	6283-63-2 / 228-500-6 / ---	< 5	Xn; R 21/22	Acute tox. 4 Acute tox. 4	H302 H312

\*For the wording of R- rsp. H-phrases and danger classification see section 16.

### Section 4 First-aid measures

#### 4.1 Description of first-aid measures

Remove immediately all contaminated clothing.  
Consult physician if disturbances occur.  
No medication in case of unconsciousness or cramps.

##### After inhalation

Move affected person immediately to fresh air. Consult physician if disturbances occur.  
Upon unconsciousness transport and rest in recovery position.

##### After skin contact

After skin contact, wash with plenty of water and soap.  
In case of persistent skin irritation consult physician.

##### After eye contact

After eye contact, remove existing eye lenses and rinse immediately eyes and lids with running water for at least 10 to 15 minutes, lifting lids. Consult an ophthalmologist immediately.

##### After ingestion

If conscious, give water to drink immediately (400-500ml). Avoid vomiting. Do not attempt to neutralize. Consult physician immediately.

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

No data available.

- 4.3 Indications of immediate medical attention and special treatment needed.  
Depending on patient's condition, symptoms and general condition should be evaluated by a physician.



## Section 5

### Fire-fighting measures

- 5.1 Extinguishing media
- ☉ Suitable extinguishing media  
Adapt extinguishing media to environment. Product itself is non flammable.
  - ☉ Unsuitable extinguishing media for safety reasons  
Full water jet.
- 5.2 Special hazards arising from the substance or mixture  
Fire may release: Sulphur oxide (SO<sub>2</sub>)
- 5.3 Special protective actions for fire fighters
- ☉ Special protective equipment  
Wear self-contained breathing apparatus.  
Wear acid resistant full protective clothing.  
Dispose of contaminated extinguishing water separately, do not empty into canalization.
  - ☉ Additional information  
Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Knock down gases/vapours/mists with a water spray jet.



## Section 6

### Accidental release of material

- 6.1 Personal precautions, protective equipment and suitable emergency procedures.  
Restricted access to affected area during cleaning. Wear full protective clothing. Avoid skin and eye contact. Ensure adequate ventilation. Do not inhale vapours/aerosols.
- 6.2 Environmental precautions  
Do not empty into canalization/surface water/ground water.  
When penetrated Inform competent authority.
- 6.3 Methods and material for retention and cleaning up.  
Bind with absorbent material (sand, diatomaceous earth, universal binders, sawdust). Use neutralizing agents. Dispose contaminated material as waste in proper container according to section 13.
- 6.4 Reference to other clauses  
Protective measures see section 8

Disposal see section 13

**Section 7 Handling and storage**

- 7.1 Protections for safe handling
  - Avoid contact with eyes and skin.
  - Comply with legal protection and safety instructions.
  - Wear personal protective equipment.
- 7.2 Conditions for safe storage including any incompatibilities
  - Fire and explosion protection measures
    - No special measures required. Do not smoke.
  - Design of storage rooms and container
    - Store tightly sealed in a cool and dry place. Protect from heat and frost.
    - Do not store with alkalis (bases).
    - Keep recipient tightly closed.
  - Material incompatibility
    - Corrosive to metals.
  - Recommended storage temperature
    - Protect from heat and direct sunshine.
  - VbF class
    - 8 B non combustible corrosive substances.
- 7.3 Specific end uses
  - Reagent solution for the determination of chlorine/ozone.

**Section 8 Exposure controls/personal protection**

8.1 Control paramters

**MAK-Values acc. GKV 2007**

				TMW / KZW*		Exposure period
Name	CAS#		[ppm]	[mg/m <sup>3</sup> ]	[min]	
Sulphuric acid	7664-93-9	MAK		0,1 E <sup>(1)</sup> / 0,2 E		8x5 (Mow)
Sulphuric acid	7664-93-9	LZW IOELV (EC)		0,05		

\*TMW Tagesmittelwert (daily mean value)      KZW Kurzzeitwert (short term value)  
 E Einatembare Fraktion (respirable fraction)      Mow als Momentanwert (momentary value)  
 LZW Langzeitwert (long-term value)

<sup>[1]</sup> correspond to 0,05 mg/m<sup>3</sup> thoracic; when selecting an appropriate measuring method beware of any malfunction caused by other sulphur compounds. Biological monitoring In accordance with Directive 2009/161/EC

## 8.2 Exposure controls

### ☉ General protective and hygiene measures

Follow usual precautions when dealing with chemicals.

Keep away from food and beverages. Do not eat or drink at work, wash hands before breaks and end of work.

Change contaminated clothing and immerse in water.

Avoid eye and skin contact.

### ☉ Respiratory protection

Wear appropriate respirator if ventilation is inadequate and/or for occurrences of aerosols.

Recommended filter type: Filter E.

### ☉ Hand protection

Wear protective gloves.

Suitable glove material: e.g. nitrile rubber

Recommended thickness of the material:  $\geq 0.11$  mm

Value for the permeation: Level 6 > 480 min)

The selection of protective gloves depends not only on the material, but also on further quality characteristics and varies from manufacturer to manufacturer. Selection of glove material after consideration of respective break through times, permeation rates and degradation.

### ☉ Eye protection

Tightly sealed goggles

### ☉ Personal protection

Wear acid proof protective clothing. Preventive skin protection.

Wash hands and face after working with substance.

### ☉ Environmental exposure controls

Do not empty into canalization/surface water/ground water. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.



## Section 9

### Physical and chemical properties

#### 9.1

Information on basic physical and chemical properties.

☉ Appearance	liquid
☉ Color	colorless
☉ Odor	odorless
☉ Odor threshold	n. a.
☉ pH value (20 °C)	Strongly acidic < 2.00

● Melting point	n. a.
● Boiling point / boiling range	appr. 110 °C
● Flash point	n. a.
● Evaporation rate	n. a.
● Flammability	n. a.
● Upper explosion limit	n. a.
● Lower explosion limit	n. a.
● Vapor pressure	n. a.
● Density (20 °C)	1,2 g/cm <sup>3</sup>
● Water solubility ( 20°C)	soluble (caution: heat dissipation)
● Partition coefficient n-octanol/water	n. a.
● Ignition temperature	no information available
● Decomposition temperature	n. a.
● Viscosity (20°C)	n. a.
● Explosive properties	product is not explosive.
● Oxidizing properties	n. a.

\* The mixture itself has not been tested. No information on single ingredients provided by suppliers.

9.2 Further information  
None.



<b>Section 10</b>	<b>Stability and reactivity</b>
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10.1	<p>Reactivity</p> <p>No hazardous reaction when using according to regulations. Corrosive effect. Hygroscopic.</p>
10.2	<p>Chemical stability</p> <p>No decomposition when using according to regulations.</p>
10.3	<p>Possibility of hazardous reactions</p> <p>Violent reactions possible with: Water, alkali metals, alkali compounds, ammonia, alkali, metals, alkaline earth metals, alkaline earth compounds, metal alloys, acids. Phosphorous oxides, phosphorus, hydrides, halogen compounds, halogen oxygen compounds, permanganates, nitrates, carbides, organic solvents, acetylate, nitriles, nitrides, organic nitro compounds, aniline, peroxides, picrates, lithiume silicide.</p>

Formation of hydrogen on reaction of the substance with metals, danger of explosion!

10.4

Conditions to avoid

Avoid excessive heat.

10.5

Incompatible materials

Corrosive to metals.

Destroying effect to vegetable and animal tissues.

10.6

Hazardous decomposition products.

No decomposition when using according to regulations.

In the event of fire: Sulphur oxides (SO<sub>x</sub>)

## Section 11

### Toxicological information

11.1

Acute toxicity

- Classification relevant LD<sub>50</sub>/LC<sub>50</sub>-values of individual components  
 (Source: data from the manufacturer)

name	CAS-number	
Sulphuric acid	7664-93-9	LD <sub>50</sub> (oral/rat) = 2140 mg/kg LC <sub>50</sub> (inhalative/rat) = 510 mg/m <sup>3</sup>
N, N-diethylene-1,4-phenylene-diammoniumsulphate	6283-63-2	LD <sub>50</sub> (oral/rat) = 497 mg/kg

- Primary irritations

Skin: irritant

Mucous membranes: irritant

Eye: irritant

- Sensitization

No sensitizing effects known.

- Carcinogenicity

The product does not contain any ingredients at a concentration equal or higher than 0,1%, being listed as carcinogen at the International Agency for Cancer Research (IARC) or the American Conference for Governmental Industrial Hygienic (ACGIH).

- Genotoxicity

Ames test (in vitro): Salmonella typhimurium: result: negative (IUCLID)


- Mutagenity

Product does not contain any ingredients at a concentration of equal or above 0,1 % classified as mutagenic.

- Reproductive toxicity



Product does not contain any ingredients at a concentration of equal or above 0,1 % classified as toxic for reproduction.

 Further information

After inhalation of aerosols: Damage to the affected mucous membranes  
 After skin contact: Serious chemical burns with formation of chemical burn scabs.  
 After eye contact: Chemical burns, corneal damage.

After absorption: Severe pain (risk of perforation), nausea, vomiting and diarrhoea. After a latency period of a few weeks, under certain circumstances constriction of the pyloric orifice (pylorusstenosis).

Observe the conventional precautionary measures when handling chemicals.

Classification of preparation according to CLP-Regulation (EC) 1272/2008 Annex I and to Dangerous Preparations Directive 1999/45/EC.

## Section 12

### Ecological information

12.1

Toxicity

The entire mixture was not subject to any testing. Classification of preparation according to Dangerous Preparations Directive 1999/45/EC resp. according to CLP-Regulation (EC) 1272/2008 Annex VI.

 Aquatische Toxizität

7664-93-9 Sulphuric acid	
EC50	29 mg/l/24h ( <i>Daphnia magna</i> ) (referred to pure substance, IUCLID)

12.2

Persistence and degradability

No data available.

12.3

Bioaccumulative potential

N, N-diethylene-1.4-phenylene-diammoniumsulphate (CAS: 6283-63-2)

Source: Merck

log Pow: 2.24. Considerable bioaccumulative potential is not to be expected (log Pow 1-3)

12.4

Mobility in soil

No data available for the product itself.

12.5

Results of PBT- and vPvB-assessment

No data available.

12.6

Other adverse effects





Do not allow undiluted product to reach ground water, water bodies or sewage system.

Harmful effect due to pH shift.


 Other ecological information

Quantitative data on the ecological effect of this product are not available.

**Section 13****Disposal considerations**

- 13.1 Waste treatment methods
- May not be disposed of with the regular household trash. Do not allow to reach sewage.
-  Waste key number  
59305g (ÖNORM S 2100); List of waste
  -  Waste name  
Laboratory waste and chemistry residues.
  -  European waste catalogue  
16 05 06\* (laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals)  
Note: EAK-waste key is source-related. This may lead to another classification. The decision is up to the end-user.
  -  Contaminated packaging material  
Recommendation: Empty container completely and deliver to a specialized company for reconditioning, recycling or disposal.

**Section 14****Transport information**

- 14.1 UN-number  
2796
- 14.2 UN proper shipping name  
SULPHURIC ACID with not more than 51% acid  
SULPHURIC ACID with not more than 51% acid
- 14.3 Transport hazard class
- 

8
- 14.4 Packaging group  
II
- 14.5 Environmental hazards  
None
- 14.6 Special precautions for the user  
Colourless fluid. Mixtures with relative density not exceeding 1,405.  
Seriously reacting with most metals. Causes burns to skin, eyes and mucosae.
- 14.7 Transport in bulk according to Annex II of MARPOL agreement 73/78 and according to IBC-Code

F-A, S-B  
IBC02**Section 15 Regulatory information**

15.1 Safety-, health- and environmental regulations/legislation specific instructions for substance or mixture

This safety data sheet complies with the Regulations (EC) REACH N° 1907/2006. The mixture is classified according to Directive CLP (EC) N° 1272/2008 Annex VI.

**National regulatory:**

Austria:

- ☉ Labeling according to BGBl II 2000/81 ChemV 1999. The product is classified and requires hazards identification.
- ☉ ChemG 1996-amendment 2011. This product is classified hazardous according to the Austrian chemical legislation of 1996-amendment 2011.
- ☉ VbF - Directive about combustible liquids (BGBl 1991/240) This product is not considered as combustible liquid.

Germany:

- ☉ Classification in water hazard classes according VwVwS dated 17.07.2005/Annex 2 (Code N° 182).  
1 (slightly water pollutant)

15.2 Chemical safety assessment

The mixture is not subject to a chemical safety assessment.

**Section 16 Other information**

The information provided on this SDS is correct to the best of our knowledge and information, but not to be considered as warranty or quality specification nor creates contractual relationship. The information given is designed only as guidance for safe handling. Classification according to Dangerous Preparations Directive 1999/45/EC resp. according to Directive CLP (EC) N° 1272/2008 Annex VI.

**Exempted quantities** according to IMDG, ADR, RID and IATA are limited to max. 30 ml net per inner packaging and 500 ml net per outer packaging. Code E2 applies.

The max. quantity for **Limited Quantities (LQ)** according to ADR, RID, IMDG is 1 liter net per inner packaging. According to IATA the max. quantity is 0,1 liter net per inner packaging and 0,5 liter net per package.

**☉ Relevant R-Phrases**

- |         |  |
|---------|--|
| R 21/22 | Harmful in contact with skin and if swallowed. |
| R 35    | Causes severe corrosion.                       |
| R 36/38 | Irritating to eyes and skin.                   |

☾ Relevant H-Phrases

H 290	May be corrosive to metals.
H 315	Causes skin irritation.
H 319	Causes serious eye irritation.

☾ Relevant hazard classification

Acute Tox. 4	Acute toxicity category 4
Skin corr. 1A	Skin corrosion category 1A
Met. corr. 1	Substances or mixtures corrosive to metals category 1

☾ Issue Number 3; replaces previous editions

☾ Written by WAPOTEC GmbH

☾ Short cut  
n. t. not tested  
n. a. not applicable  
PBT persistent, bio-accumulative, toxic  
vPvB high persistent, high bio-accumulative  
ECHA (European Chemicals Agency) (<http://www.echa.eu>)

