Safety data sheet
according to
Regulation (EG) 1907/2006

created: 01.06.2011
updated: 22.01.2014

1 Identification of the substance/mixture and the company

1.1	Product identifier	**HydroQuant® CI-2**
1.2	Use of substance	Reagent solution for the determination of chlorine/ozone
1.3	Supplier	TCDO Produktionsgesellschaft mbH Carola-Blome-Str. 7 A-5020 Salzburg Tel: +43 662 434342-0 Fax: +43 662 434342-3
	Contact	Mr. G. Weiss Email: 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

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.

2.2 Identification labeling

according to Directive (EC) 1272/2008

Attention

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

P338	contact lenses if present and easy to do. Continue rinsing
P337 + P313	If eye irritation persists: Get medical advice/attention.
P390	Absorb spillage to avoid material damage.
P501	Dispose of contents/container to collection system.

- Identification of packings containing 125 ml max. according to Directive (EC) 1272/2008

Achtung

P280	Wear protective gloves/ eye protection..
P305 + P351 + P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P501	Dispose of contents/container to collection system.

- according to Directive (EC) N° 1999/45

Xn; Harmful

C; Corrosive

R 21/22	Harmful in contact with skin and if swallowed.
R 34	Causes burns.
R 37/38	Irritating to respiratory system and skin.
S 1/2	Keep locked up and out of the reach of children.
S 44	If you feel unwell seek medical advice immediately (show the label where possible).

- 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.

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	H290 H314
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.

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 linses and rinse immediately eyes and lids with running water for at least 10 to 15 minutes, lifting lids. Consult an ophthalmologist immediately.

- After ingestion

Rinse mouth with water. If victim is conscious: give a glass of water. 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.

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_{x2})

5.3 Special protective actions for fire fighters

Special protective equipment: Wear self-contained breathing apparatus. Wear acid resistent full protective clothing.
Dispose of contaminated extinguishing water separately, do not empty into canalization.

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, acid binders, universal binders sawdust). Use neutralizing agents.
Dispose contaminated material as waste in proper container according to point 13.

6.4 Reference to other clauses

Protective measures see point 8
Disposal see point 13

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 — Not applicable.

7.3 Specific end uses

Reagent solution for the determination of chlorine/ozone.

8 Exposure controls/personal protection

8.1 Control paramters

MAK-Values acc. GKV 2007

			TMW / KZW*		Exposure period
Name	CAS#		[ppm]	[mg/m³]	[min]
Sulphuric acid	7664-93-9	MAK		0,1 E[1] / 0,2 E	8x5 (Mow)

*TMW	Tagesmittelwert (daily mean value)	KZW	Kurzzeitwert (Short term value)
E	Einatembare Fraktion (Respirable fraction)	Mow	als Momentanwert (Momentary value)

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 immediately.
Avoid eye and skin contact.

- Respiratory protection

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

- Hand protection

Wear protective gloves.
Suitable glove material: nitrile rubber
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.

- 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.

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	Strongly acidic
Melting point	N. u.*
Boiling point / boiling range	>100 °C
Flash point	N. a.
Evaporation rate	N. t.*
Flammability (solid, gase)	N. a.
Upper explosion limit	N. t.*
Lower explosion limit	N. t.*
Vapor pressure (50 °C)	N. t.
Density (20 °C)	1,2 g/cm^3
Water solubility (20°C)	Soluble
Partition coefficient n-octanol/water	N. t.*
Decomposition temperature	N. t.*
Viscosity at 20°C	N. t.*
Explosive properties	Product is not explosive.
Oxidizing properties	N. t.*

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

9.2 Further information

None.

10 Stability and reactivity

10.1 Reactivity

No hazardous reaction when using according to regulations.
Corrosive effect.

10.2 Chemical stability

No decomposition when using according to regulations.

10.3 Possibility of hazardous reactions

Violent reactions possible with:
Water, alkali metals, alkali compounds, ammonia, alkali, metals, alkaline earth metals, alkaline earth compounds, metal alloys, acids.
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_x)

11 Toxicological information

11.1 Acute toxicity

- Classification relevant LD_{50}/LC_{50}-values of individual components

Name	CAS-Number	
Sulphuric acid	7664-93-9	LD_{50} (oral/rat)=2140 mg/kg LC_{50} (inhalative/rat)= 0,5 mg/l
N, N-diethylene-1.4-phenylene-diammoniumsulphate	6283-63-2	LD_{50} (oral/rat)=497 mg/kg

- Primary irritations

  Skin: irritant
  Eye: irritant

- Sensitization

No sensitizing effects known.

- Cancerogenity

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).

- 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

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

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.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulatiive 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.

13 Disposal considerations

13.1 **Méthodes de traitement des déchets**

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.

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

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

This product is classified hazardous according to the Austrian chemical legislation of 1996.

- 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.

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.

Excepted 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 if in contact with skin and if swallowed.
R 35	Causes severe burns.

- Relevant H-Phrases

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

- 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 2
  Replaces previous edition
  Modification to Regulation (EC) 453/2010
  Amendments: article 2, 3, 14, 16
- Written by: UmEnA GmbH
- Translated by: Wapotec Gmbh

- Short cuts

n. t. not tested
n. a. not applicable