

Commercial Product Name: **Chlorosulfonic acid**

Article-No.: 80004-NOEU

Version: 2/en

Revision date: 30.05.2013

Print date: 30.05.2013

1. Identification of the substance/mixture and of the company/undertaking**Product identifier**

Commercial Product Name	Chlorosulfonic acid
CAS no.	7790-94-5
Index-No.	016-017-00-1
EC-No.	232-234-6

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Transported isolated intermediate
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Details of the supplier of the safety data sheet

Company designation	CABB AG Düngerstrasse 81 CH-4133 Pratteln 1 Telephone: +41 (0) 61 825 3111 FAX: +41 (0) 61 821 8027 Email: contact@cabb-chemicals.com Internet: www.cabb-chemicals.com
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Marketer	CABB AG Düngerstrasse 81 CH-4133 Pratteln 1 Telephone: +41 (0) 61 825 3111 FAX: +41 (0) 61 821 8027 Email: contact@cabb-chemicals.com Internet: www.cabb-chemicals.com
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Contact person	Peter Knobloch – HSE/QA
Responsible Department	contact@cabb-chemicals.com

Emergency telephone number

Emergency telephone number	+41 (0) 61 825 31 11
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2. Hazards identification**Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008	Skin Corr. 1A; H314 STOT SE 3; H335
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Classification according to Directive 67/548/EEC / 1999/45/EEC	R14: Reacts violently with water. C, R35: Causes severe burns. Xi, R37: Irritating to respiratory system.
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Label elements

hazard pictogram



GHS05



GHS07

signal word

Danger

H-statement(s)

H314: Causes severe skin burns and eye damage.

H335: May cause respiratory irritation.

EUH014: Reacts violently with water.

P-statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P308+P313: IF exposed or concerned: Get medical advice/attention.

Other hazards

Health hazard

Reacts violently with water. Irritating to respiratory system. Causes severe burns.

3. Composition/information on ingredients**Hazardous ingredients**

Ingredient		Classification (EEC) No 67/548	Concentration
		Classification (EC) 1272/2008	
Chlorschwefelsäure	Chlorschwefelsäure	R14 C; R35 Xi; R37	100.0 % by weight
	EC-No.: 232-234-6 Index-No.: 016-017-00-1	Skin Corr. 1A; H314 STOT SE 3; H335	

4. First aid measures**Description of first aid measures**

General advice

Take off contaminated clothing and shoes immediately. Call a physician immediately.

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If inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.
In case of skin contact	Wash off with plenty of water. Remove contaminated clothing and shoes. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
In case of eye contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
If swallowed	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician immediately.
Notes to physician	
Hazards:	Inhaled corrosive substances can lead to a toxic oedema of the lungs. Causes severe burns.
Symptoms:	Shortness of breath, Blistering, Vomiting, Cough, Irritation and corrosion, Lachrymation
Treatment:	Drink plenty of water. Treat symptomatically.

5. Firefighting measures

Extinguishing media

Suitable extinguishing media	The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases	In case of fire hazardous decomposition products may be produced such as: Gaseous hydrogen chloride (HCl). Sulphur oxides
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Advice for firefighters

Special protective equipment for firefighting	Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.
Additional information on fire-fighting	Keep containers and surroundings cool with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Keep people away from and upwind of spill/leak. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.
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Environmental precautions

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Residues Neutralize with lime milk or soda and flush with plenty of water.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling

Open drum carefully as content may be under pressure. In case of insufficient ventilation, wear suitable respiratory equipment. Refill and handle product only in closed system.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

8. Exposure controls/personal protection**Control parameters****chlorosulphonic acid**

Great Britain

Long-term exposure value/ mg/ m3	Remarks	Source
1	R14, 35, 37	19

19 – EH40/200 Workplace exposure limits (October 2007)

Exposure controls

Respiratory protection

Do not inhale aerosol. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus. Recommended Filter type:B-(P2)

Hand protection

Suitable material: Viton (R)

Material thickness: 0.7 mm

Break through time: > 480 min

Suitable material: Impervious butyl rubber gloves

Material thickness: 0.7 mm

Break through time: > 60 min

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Eye protection	Tightly fitting safety goggles
Skin and body protection	Long sleeved clothing Wear as appropriate: Complete suit protecting against chemicals
General protective and hygiene measures	When using do not eat or drink. When using do not smoke. Wash hands and face before breaks and immediately after handling the product. Keep away from food, drink and animal feedingstuffs. Keep away from tobacco products.

9. Physical and chemical properties

Information on basic physical and chemical properties

Form	liquid
Colour	colourless – light yellow
Odour	stinging
Boiling point [°C]	151 – 152
Pressure:	755 mm Hg
Vapour pressure [kPa]	128 Pa
Temperature:	20 °C
Density [g/cm ³]	1.75 g/ml
Temperature:	20 °C

10. Stability and reactivity

Reactivity

Thermal decomposition	> 151 °C
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Possibility of hazardous reactions

Hazardous reactions	Sensitive to air. Reacts violently with water. Decomposes on heating.
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Conditions to avoid

Conditions to avoid	Direct sources of heat. Extremes of temperature and direct sunlight. Exposure to moisture.
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Incompatible materials

Materials to avoid	Alcohols, Amines, Humid air, Organic materials, Water, Ether, Ketones
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Hazardous decomposition products

Hazardous decomposition products	Chlorine, Hydrogen chloride gas, Sulphur oxides, Sulphur trioxide
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11. Toxicological information

Information on toxicological effects

Oral toxicity [mg/kg]

Test criterion: LD50/oral/rat = 50 mg/kg

Remarks: RTECS

Inhalative toxicity [mg/l]

Test criterion: LC50/inhalation/4h/rat = 4.8 mg/m³

Remarks: MERCK

Subacute, subchronic, chronic toxicity No known effect.

Irritant effect on skin Extremely corrosive and destructive to tissue.

Irritant effect on eyes Very corrosive. Causes serious eye damage.

Sensitization No known effect.

carcinogenic effects No known effect.

Mutagenicity No known effect.

Reproduction toxicity No known effect.

Dermal absorption data Causes skin burns.

12. Ecological information

Toxicity

Toxicity to fish [mg/l]

Test criterion: LC50/96Std/Gambusia affinis = 282 mg/l

Remarks: HOMMEL

Persistence and degradability

Biodegradability not applicable

13. Disposal considerations



Waste treatment methods

Disposal considerations Taking into account local regulations the product may be disposed of as waste water after neutralisation.

Uncleaned empty packaging Dispose of as unused product.

Suitable cleaning agents Sodium hydroxide solution 5%

14. Transport information

	Land transport GGVS/ ADR/RID	Marine transport IMDG/ GGVSee	Air transport ICAO/IATA
UN-No	1754	1754	1754
Class	8	8	8
Packaging group	I	I	
Description of the goods	CHLOROSULPHONIC ACID	CHLORSULFONSÄURE	Chlorsulfonsäure
Proper shipping name		CHLOROSULPHONIC ACID	Chlorosulphonic acid
Remarks	mit oder ohne Schwefeltri-oxid	(with or without sulphur trioxide)	(with or without sulphur trioxide)
Labels	8 	8 	8 - Corrosive
Risk No.	X88		
Category	1		
Classification Code	C1		
Tunnel restriction code	E		
EmS		F-A;S-B	
Environmental hazards		0: Non-marine pollutant	
Stowage category		C	

	TDG – Transport of Dangerous Goods (Canada)	CFR 49 – Code of Federal Regulations (US)
UN-No	1754	1754
Class	8	8
Packaging group	I	I
Description of the goods	CHLOROSULPHONIC ACID	Chlorosulfonic acid
Remarks	with or without sulphur trioxide	(with or without sulfur trioxide)
Labels	8	8, 6.1
Environmental hazards	0: Non-marine pollutant	0: Non-marine pollutant

15. Regulatory information

16. Other information

R phrase(s) applying to ingredients

R14: Reacts violently with water.
R35: Causes severe burns.
R37: Irritating to respiratory system.

H-statement(s) applying to ingredients

H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.

Abbreviations and acronyms

CHS

Recommendation of the manufacturer

However, due to the hazardous properties of the product it is labelled as follows:
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.
EUH014: Reacts violently with water.

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This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.