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MATERIAL SAFETY DATA SHEET (SDS/MSDS)

CHLOROSULFONIC ACID 97% FOR SYNTHESIS

CAS-No.: 7790-94-5

Product Code: 00786

Molecular Formula: $HClO_3S$

Chemnovo

DRIVEN BY CHEMISTRY, DEFINED BY PRECISION

CHEMNOVO SYNTHESIS PVT LTD.

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Chlorosulfonic Acid 97% For Synthesis
EC-No.	:	232-234-6
CAS No	:	7790-94-5
Synonyms	:	Sulphuric chlorohydrin,Chlorosulphuric acid

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company : Chemnovo Synthesis Pvt Ltd.
N-226 Near Kumbhavali Naka
Tarapur MIDC, Boisar-401 506
Palghar, Maharashtra
Telephone : +91 7400096089
Email: export@chemnovo.in

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1A	H314
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
C; R35
Xi; R37
R14

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05

GHS07

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H314 - Causes severe skin burns and eye damage. H335 - May cause respiratory irritation.
Precautionary statements (CLP)	:	P280 - Wear protective gloves, protective clothing, eye protection, face protection. 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

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	:	Chlorosulfonic Acid 97% For Synthesis
CAS-No.	:	7790-94-5
EC-No.	:	232-234-6

Full text of R- and H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	:	Take off immediately all contaminated clothing. Wash with plenty of water/.... Immediately call a POISON CENTER/doctor.

First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	:	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor

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

Symptoms/effects	:	Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	:	May cause respiratory irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Dry chemical, CO2, dry sand, or alcohol-resistant foam.
Unsuitable extinguishing media	:	Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighter

Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Use personal protective equipment as required.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Collect spillage. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Do not breathe vapours. Avoid contact with skin and eyes. Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or in a wellventilated area.
Hygiene measures	:	Wash hands and other exposed areas with mild soap and water

before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Keep container tightly closed. Store in dry protected location to prevent any moisture contact.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	:	protective gloves
Eye protection	:	Chemical goggles or face shield
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	Approved supplied air respirator

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Molecular mass	:	116.52 g/mol
Colour	:	Yellow.
Odour	:	No data available
Odour threshold	:	No data available
pH	:	1
Relative evaporation rate (butylacetate=1)		No data available
Melting point	:	-80 °C
Freezing point	:	No data available
Boiling point	:	151 - 152 °C
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	1 mm Hg (at 20°C)
Relative vapour density at 20 °C	:	4.02
Relative density	:	No data available
Density	:	1.76 g/cm^3
Solubility	:	Water: Soluble in water
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available

Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Highly reactive material. Reacts violently with water

10.4. Conditions to avoid

Direct sunlight. Heat. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Causes severe skin burns and eye damage.
pH	:	1
Serious eye damage/irritation	:	Serious eye damage, category 1, implicit
pH	:	1
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	:	Do not allow water (or moist air) contact with this material.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

14.1. UN number

UN-No. (ADR)	:	1754
UN-No. (IMDG)	:	1754
UN-No.(IATA)	:	1754
UN-No.(AND)	:	1754
UN-No. (RID)	:	1754

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	CHLOROSULPHONIC ACID
Proper Shipping Name (IMDG)	:	CHLOROSULPHONIC ACID
Proper Shipping Name (IATA)	:	CHLOROSULPHONIC ACID
Proper Shipping Name (ADN)	:	CHLOROSULPHONIC ACID
Proper Shipping Name (RID)	:	CHLOROSULPHONIC ACID
Transport document description (ADR):		UN 1754 CHLOROSULPHONIC ACID, 8, I, (E)
Transport document description (IMDG)		UN 1754 CHLOROSULPHONIC ACID, 8, I
Transport document description (IATA) :		UN 1754 CHLOROSULPHONIC ACID, 8
Transport document description (ADN) :		UN 1754 CHLOROSULPHONIC ACID, 8, I
Transport document description (RID) :		UN 1754 CHLOROSULPHONIC ACID, 8, I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	:	8
Danger labels (ADR)	:	8

:

IMDG

Transport hazard class(es) (IMDG)	:	8
Danger labels (IMDG)	:	8

:

IATA

Transport hazard class(es) (IATA)	:	8

AND

Transport hazard class(es) (ADN)	:	8
Danger labels (AND)	:	8

:

RID

Transport hazard class(es) (RID)	:	8
Danger labels (RID)	:	8

:

14.4. Packing group

Packing group (ADR)	:	I
Packing group (IMDG)	:	I
Packing group (IATA)	:	Not applicable
Packing group (ADN)	:	I
Packing group (RID)	:	I

14.5. Environmental hazards

Dangerous for the environment	:	No
Marine pollutant	:	No
Other information	:	No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	:	C1
Limited quantities (ADR)	:	0
Excepted quantities (ADR)	:	E0
Packing instructions (ADR)	:	P001
Mixed packing provisions (ADR)	:	MP8, Mp17
Portable tank and bulk container instructions (ADR)	:	T20
Portable tank and bulk container special provisions (ADR)	:	Tp2
Tank code (ADR)	:	L10BH
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	1
Special provisions for carriage - Operation (ADR)	:	S20
Hazard identification number (Kemler No.)	:	X88
Orange plates	:	X88 1754

Tunnel restriction code (ADR)	:	E
EAC code	:	4WE
APP code	:	B
- Transport by sea		
Packing instructions (IMDG)	:	P001
Tank instructions (IMDG)	:	T20
Tank special provisions (IMDG)	:	Tp2
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-B
Stowage category (IMDG)	:	C
Stowage and handling (IMDG)	:	Sw2
Properties and observations (IMDG)	:	Colourless liquid with a pungent odour. Reacts violently with water, evolving hydrogen chloride, an irritating and corrosive gas apparent as white fumes. In the presence of moisture, highly corrosive to most metals. Causes severe burns to skin, eyes and mucous membranes.
MFAG-No	:	137
- Air transport		
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	Forbidden
PCA max net quantity (IATA)	:	Forbidden
CAO packing instructions (IATA)	:	Forbidden
CAO max net quantity (IATA)	:	Forbidden
ERG code (IATA)	:	8W
- Inland waterway transport		
Classification code (ADN)	:	C1
Limited quantities (AND)	:	0
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	0
- Rail transport		
Classification code (RID)	:	C1
Limited quantities (RID)	:	0
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P001
Mixed packing provisions (RID)	:	MP8, Mp17
Portable tank and bulk container instructions (RID)	:	T20
Portable tank and bulk container special provisions (RID)	:	Tp2
Tank codes for RID tanks (RID)	:	L10BH

Special provisions for RID tanks (RID)	:	TU38, Te22
Transport category (RID)	:	1
Hazard identification number (RID)	:	X88

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Chlorosulfonic Acid 97% For Synthesis is not on the REACH Candidate List

Chlorosulfonic Acid 97% For Synthesis is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV	:	Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV; ID No. 236)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen		Chlorosulfonic Acid For Synthesis is listed
SZW-lijst van mutagene stoffen	:	Chlorosulfonic Acid For Synthesis is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	The substance is not listed

Denmark

Recommendations Danish Regulation	:	Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Skin Corr. 1A	Skin corrosion/irritation, Category 1A
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
R14	Reacts violently with water
R35	Causes severe burns
R37	Irritating to respiratory system
C	Corrosive
Xi	Irritant

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

Version: 2.0
Revision Date: 10 February 2026