

MATERIAL SAFETY DATA SHEET
(R)-(-)-2-CHLOROPROPAN-1-OL 96%

Section 1 - Chemical Product and Company Identification

MSDS Name: (R)-(-)-2-CHLOROPROPAN-1-OL 96%
Catalog Numbers: 69.42
Synonyms: (R)-(-)-Propylene chlorohydrin
Company Identification: Tau-Chem, Ltd.
 Nobelova 34, P.O. Box 29
 836 05 Bratislava, Slovak Republic
 Phone: +421 2 44 452 252 Fax: +421 2 44 457 645

Relevant identified uses of substance or mixture and uses advised against

Identified uses Laboratory chemicals, Manufacture of substances

POISON CENTER: National Toxicological Information Centre
 Limbová 5, 833 05 Bratislava,

Emergency Numbers Slovakia: Phone: +421 2 54 774 166 Fax: +421 2 54 774 605

Section 2 - Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3)

Acute Toxicity (Category 4)

Eye irritation (Category 2)

According to European Directive 67/548/EEC as amended.

Fammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

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

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapor.

H302

Harmful if swallowed.

H332

Harmful if inhaled.

H312

Harmful in contact with skin.

Precautionary statement(s)

P210

Keep away from heat/sparks/opened flames/hot surfaces.- No smoking

P261	Avoid breathing dust/foam/mist/spray.
P243	Take precautionary measures against static discharge.
P281	Use <u>personal protective equipment</u> as required.
P301+P312	IF <u>SWALLOWED</u> : Call a <u>POISON CENTER</u> or doctor/physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON <u>SKIN</u> (or hair): Remove/Take off immediately all contaminated clothing. Rinse <u>skin</u> with water/shower.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P235	Store in a <u>well-ventilated</u> place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Hazard symbol(s)

According to European Directive 67/548/EEC as amended



F Flammable.

R-phrases(s)

R10	Flammable liquid.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.

S-phrases(s)

S16	Keep away from sources of ignition - No smoking.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39	Wear suitable gloves and eye/face protection.

Other hazards None.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
37493-14-4	(R)-(-)-2-CHLOROPROPAN-1-OL	96	Unlisted

Classification Flam Liq. 3; Eye Irrit.2; Acute Tox. 4
H226,H302;H332,H 312
F; R11-R20/21/22-R36/37/38

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 – First Aid Measures

General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled:	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
In case of skin contact:	Wash off with soap and plenty of water. Consult a physician.
In case eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable extinguishing media:	For small (incipient) fires, use media such as “alcohol” foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special protective equipment for fire-fighters:	Wear self contained apparatus breathing apparatus for fire fighting if necessary.
Further information:	Use water spray to cool unopened containers.

Section 6 – Accidental Release Measures

Personal precautions:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Environmental precautions:	Prevent further leakage or spillage if safe to do. Do not let product enter drains.
Methods and materials for containment and cleaning up	Contain spillage and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations. (See section 13)

Section 7 – Handling and Storage

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid inhalation of vapor, mist and gas. Ensure adequate ventilation. Keep away from sources of ignition. – No smoking. Take measures to prevent to build up of electrostatic charge.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from sources of ignition. Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Store in a dry area.

Section 8 – Exposure Controls, Personal Protection

Personal protective equipment:	
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN)

14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection	The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
Eye protection:	Face shield and safety glasses.
Skin and body protection:	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 – Physical and Chemical Properties

Appearance

Form:	Clear liquid
Colour:	Colourless to slight yellow
Safety data:	
pH	Not available
Melting Point:	Not available
Boiling Point:	130 °C / 760 mm Hg
Flash Point:	51 °C
Ignition temperature:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Solubility in water:	Soluble
Density:	1.090 g/ml
Refractive Index:	1.4370 – 1.4390
Optical activity:	$[\alpha]_{20/D} -21 \pm 1^\circ$, (c = 2 CHCl ₃)
Molecular Formula:	C ₃ H ₇ ClO
Molecular Weight:	94.54 g/mol

Section 10 – Stability and Reactivity

Chemical Stability:	Stabile under recommended storage conditions.
Conditions to Avoid:	Incompatible materials, ignition sources, excess heat.
Materials to avoid:	Strong oxidizing agents, strong acids, strong bases
Hazardous Decomposition Products	Hazardous decomposition products under fire conditions. – Carbon oxides, hydrogen chloride(g), chlorine(g).

Section 11 – Toxicological Information

Acute toxicity	No data available
Skin corrosion/irritation	No data available

Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity:	May cause cancer.

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity:	No data available
Specific target organ toxicity – single exposure	Inhalation – May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	No data available
Aspiration hazard	No data available
Potential health effect:	
Inhalation	Harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	Causes serious eye irritation

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Data not available.

Section 12 – Ecological Information

Toxicity:	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB assessment	No data available
Other adverse effects	No data available

Section 13 – Disposal Considerations

Product	Burn in a chemical incinerator equipped with an afterburner and a scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

Section 14 – Transport Information

IATA

IMDG

RID/ADR

Shipping Name:	PROPYLENE CHLOROHYDRIN	PROPYLENE CHLOROHYDRIN	PROPYLENE CHLOROHYDRIN
Hazard Class:	6.1 (3)	6.1 (3)	6.1 (3)
UN Number:	2611	2611	2611
Packing Group:	II	II	II

Section 15 – Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

Section 16 – Other Information

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Eye Irrit.	Eye irritation.
Acute Tox.	Acute toxicity.
Flam. Liq.	Flammable liquids.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H312	Harmful in contact with skin.
F	Flammable.
R10	Flammable liquid.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.

MSDS Creation Date: 07/03/2007

Revision #1 Date: 24/11/2011

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Disclaimer:

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.