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INDEX: H40828740 CAT NO: AC351580050 PO NBR: MARY ONSRUD/VC/032204

\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

(S)-(+)-3-Chloro-1,2-propanediol, 98%

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

Product Name: (S)-(+)-3-Chloro-1,2-propanediol, 98%

Product Numbers:

AC351580000, AC351580050, AC351580250

Synonyms:

(S)-(+)-Glycerol alpha-monochlorohydrin

Company Identification (Europe): Acros Organics BVBA  
Janssen Pharmaceuticaalaa 3a  
2440 Geel, Belgium

Company Identification (USA): Acros Organics  
One Reagent Lane  
Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For information in Europe, call: 0032(0) 14575211

For emergencies in the US, call CHEMTREC: 800-424-9300

For emergencies in Europe, call: 0032(0) 14575299

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
60827-45-4	(S)-(+)-3-Chloro-1,2-propanediol	98%	unlisted

Hazard Symbols: T  
Risk Phrases: 23/24/25 36/37/38 41

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Appearance: yellow to yellow-orange clear liquid.  
Olfactory: gross (absorbs moisture from the air).  
Target Organs: Central nervous system, respiratory system, eyes, skin.

Environmental Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Toxic in contact with skin.

Ingestion: May cause irritation of the digestive tract. Poison by ingestion.

Inhalation: Causes respiratory tract irritation. Toxic if inhaled.

Chronic: Not available.

\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Wash mouth out with water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

\*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not available

Flash Point: > 110 deg C (> 230.00 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

NFPA Rating: Not published.

\*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated

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in Section 8.  
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

Handling: Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container.

\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
(S)-(+)-3-Chloro-1,2-propanediol	none listed	none listed	none listed

OSHA Vacated PELs:  
(S)-(+)-3-Chloro-1,2-propanediol:  
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Not available.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Clear liquid  
Color: yellow to yellow-orange  
Odor: Not available.  
pH: Not available.  
Vapor Pressure: 0.04 mm Hg @ 25 deg C  
Vapor Density: Not available.  
Evaporation Rate: Not available.  
Viscosity: Not available.  
Boiling Point: 213 deg C  
Freezing/Melting Point: Not available.  
Decomposition Temperature:  
Solubility in water: Soluble.  
Specific Gravity/Density: 1.322  
Molecular Formula: C3H7ClO2  
Molecular Weight: 110.5008

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability: Stable.  
Conditions to Avoid: Incompatible materials, exposure to moist air or water.  
Incompatibilities with Other Materials: Strong oxidizing agents.  
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide.  
Hazardous Polymerization: Will not occur.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RECS#: CAS# 60827-45-4: TY4202300  
LD50/LC50: Not available.  
Carcinogenicity: (S)-(+)-3-Chloro-1,2-propanediol - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology: No data available.

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Teratogenicity:

No data available.

Reproductive Effects:

No data available.

Neurotoxicity:

No data available.

Mutagenicity:

No data available.

Other Studies:

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

CRA P-Series: None listed.

CRA U-Series: None listed.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT

Shipping Name: GLYCEROL ALPHA-MONOCHLOROHYDRIN

Hazard Class: 6.1

UN Number: 2689

Packing Group: III

Canadian TDG

No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL

TSCA

CAS# 60827-45-4 is not listed on the TSCA inventory.

It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority

Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants

under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

(S)-(+)-3-Chloro-1,2-propanediol is not present on state lists from

CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 41 Risk of serious damage to eyes.

Safety Phrases:

S 28A After contact with skin, wash immediately with plenty of water.

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S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S 38 In case of insufficient ventilation, wear suitable respiratory equipment.  
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 60827-45-4: No information available.

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

None of the chemicals in this product are listed on the DSL/NDSL list.

WHMIS: Not available.

CAS# 60827-45-4 is not listed on Canada's Ingredient Disclosure List.  
Exposure Limits

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 1/16/2002 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.