

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Revised: 02/06/24
Supersedes: 10/21/22

1.1 Product identifier

HiPure ECN™
High Purity Ethylene Cyanohydrin

“HiPure ECN” is a trademark of CrossChem Limited

Synonyms: B-Cyanoethanol
3-Hydroxypropionitrile

Product Code: 1100

1.2 Identified uses

Identified Uses: Chemical Intermediate

1.3 & 1.4 Supplier and Emergency contact details

COMPANY IDENTIFICATION

CROSSCHEM LIMITED
100 WESTWOOD PLACE STE 430
BRENTWOOD TN 37027 USA
+1 615 716 3510

EMERGENCY NUMBERS

CHEMTREC: 800 424 9300
Customer Number: CCN5881

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

GHS Classification

H316	Causes mild skin irritation
H318	Causes serious eye irritation

2.2 GHS Label Elements, Including Precautionary Statements

Pictogram



Single Word

Warning

Hazard statements

H316 Causes mild skin irritation
H318 Causes serious eye irritation

Precautionary statements

P262 Do not get in eyes or on skin
P264 Wash skin thoroughly after handling
P280 Wear protective gloves (butyl) / protective clothing / eye protection / face protection
P313 + P333 If skin irritation or rash occurs, get medical advice / attention
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance components

	<u>EC NO</u>	<u>CAS NO</u>	<u>CLASSIFICATION</u>	<u>WEIGHT (%)</u>	<u>MOLECULAR WEIGHT</u>	<u>MOLECULAR FORMULA</u>
Ethylene Cyanohydrin	203-704-8	109-78-4	Skin Irr; Eye Irr H316, H318	≥98.5	71.08 g/mol	C ₃ H ₅ NO

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

Skin Contact

Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Professionally wash clothing and shoes before re-use.

Inhalation (Breathing)

Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.

Ingestion (Swallowing)

Seek medical attention. Immediately induce vomiting, as directed by medical personnel. Never give anything by mouth to an unconscious person.

Notes To Physicians

Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIRE FIGHTING METHODS

5.1 Extinguishing Media

SMALL FIRES: Dry chemical or carbon dioxide. LARGE FIRES: water spray, fog, or foam.

5.2 Special hazards

Flash Point	265F 129.4C Cleveland Closed Cup
Explosive Lmts	LEL(%) Not Determined UEL(%) Not Determined
Autoignition	Not Determined

Hazardous Combustion And Decomposition Products

Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.). Oxides of nitrogen.

Fire And Explosion Hazards

Vapors can travel to a source of ignition (flame, electric motor, hot surface, cigarette, etc.) and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition.

5.3 Advice for firefighters

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition.

6.3 Methods and material for containment and clean-up

Containment

Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

Clean-Up/Personal Protection Equipment

Appropriate safety measures and protective equipment should be used.

Collection And Disposal

Stop discharge, if safe to do so. Use proper protective equipment. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

Reporting

Spills of this material in excess of a component's RQ must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations. No regulated ingredients.

7. HANDLING AND STORAGE

7.1 Technical descriptions

Personal Hygiene

Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing before re-use.

7.2 Storage and Transfer conditions

Storage Conditions

Store in cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed.

Transfer

No special precautions are needed. Follow good manufacturing and handling practices.

Empty Container Precautions

Attention! This container can be hazardous when empty. Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Guidelines

ACGIH - TLV

No regulated ingredients.

OSHA - PEL

No regulated ingredients.

8.2 Exposure controls and protection

Engineering Controls/Ventilation

Local exhaust ventilation is recommended when vapors, mists, or dusts can be released.

Eye Protection

Wear chemical splash goggles. An eye wash facility should be readily available.

Skin Protection

Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, consult glove manufacturer to determine the proper type for a specific operation. An emergency shower should be readily available.

Respiratory Protection

Avoid breathing vapor and/or mists. Wear NIOSH/MSHA-approved equipment. Determine the appropriate type by consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910.134.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Colorless
Odor	Characteristic
Physical State	Liquid
Solubility	Completely soluble
pH	Not Applicable
Boiling Point	455F 235C
Freeze/Melt	-51F -46.1C
Vapor Pressure	0.02 hPa (20 °C) (OECD 104, dynamic method) < 0.01 hPa (68 °F)
Evaporation Rt	Not Determined
VOC Material	Not Determined
Specific Grvty	Not Determined
%Non-Vol(w/w)	100

NOTE: The physical data presented above are typical values and should not be construed as a specification.

9.2 Other information

9.2.2 Other safety-related measures

Evaporation Rate [kg/(s*m ²)]	No data available
Explosive Properties	No data available

10. STABILITY AND REACTIVITY

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Hazardous polymerization

Will not occur.

10.4 Conditions to avoid

High temperatures.

10.5 Incompatibility with other materials

Amines. Oxidizers. Acids. Strong bases.

11. TOXICITY INFORMATION

11.1 Information on hazard classes

Product

Can cause possible kidney damage. Ethylene cyanohydrin is not readily hydrolyzed in the body to release cyanide. Mice and rats fed ethylene cyanohydrin for 78 weeks had lower body weights, red blood cell counts, and white blood cell counts than controls.

Oral LD50	Rat	10,000 mg/kg
	Mouse	1,800 mg/kg
Dermal LD50	Rabbit	5,000 mg/kg

Components

Ethylene cyanohydrin:

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12. ECOLOGICAL INFORMATION

No data are available on this product.

13. DISPOSAL CONSIDERATIONS

Disposal

Dispose in accordance with all local, state, and federal regulations.

General Statements

Federal regulations may apply to empty container. State and/or local regulations may be different.

General Recommendations

Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

Special Instructions

Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. TRANSPORT INFORMATION

Weight (lb)	Shipping Name Non-regulated	49	CFR Y	IATA Y	IMO Y
DOT Label DOT Label No	Not applicable ND	UN/NA Id Num WHMIS Label	Not Applicable D2		

15. REGULATORY INFORMATION

Federal

SARA Title III - Section 311/312 - Hazard Categories

N- Fire Hazard
N- Sudden Release of Pressure Hazard
N- Reactivity Hazard
Y- Immediate (acute) Health Hazard
Y- Delayed (chronic) Health Hazard

Ozone-Depleting Chemicals

No regulated ingredients.

SARA Section 302 Extremely Hazardous Mat

No regulated ingredients.

SARA Section 313 Toxic Chemicals

No regulated ingredients.

Chemical Listing

Listed on the following Country's Chemical Inventories:

European Union	EINECS (Euro. Inventory of Chem. Subst.):	Listed
Republic of Korea	Korean Inventory:	Listed
Japan	Japanese MITI Inventory:	Listed
United States	Toxic Substance Control Act	Listed

Chemical component(s) in this product are on the section 8(b) Chemical Substance Inventory List (40 CFR 710).

State Right-To-Know

Pennsylvania - New Jersey R-T-K

Ethylene Cyanohydrin	109-78-4	100
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California - California Proposition 65

No regulated ingredients.

CONEG

No data available.

Canada

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).
Class D Division 2 Sub-division B

CEPA - NPRI

No regulated ingredients.

Canadian Chemical Inventory

Domestic Substance List

Listed.

16. OTHER INFORMATION

Hazard Rating		
	HMIS	NFPA
Health	2 *	2
Fire	1	1
Reactivity	0	0

* = Chronic

Product Use

Intermediate

ABBREVIATIONS:

ACGIH = American Conference of Governmental Industrial Hygienists
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
PEL = Permissible Exposure Limit
TWA = Time Weighted Average
STEL = Short-Term Exposure Limit
BAc = Butyl acetate

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