Material Safety Data Sheet
?Propiolactone

ACC# 87030

Section 1 - Chemical Product and Company Identification

MSDS Name: ?Propiolactone
Catalog Numbers: AC269040000, AC269040050, AC269040250, AC269041000
Synonyms: 2-Oxetanone; beta-Propiolactone.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
57-57-8	?Propiolactone	98	200-340-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 70 deg C.
Danger! Possible cancer hazard. May cause cancer based on animal data. Combustible liquid and vapor. May be fatal if inhaled. Causes burns by all exposure routes. Hazardous polymerization may occur.
Target Organs: Liver, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns. Undiluted BPL is capable of producing permanent corneal opacification in the rabbit eye. (Documentation of the TLV - 7th edition.)
Skin: Causes skin burns. May be harmful if absorbed through the skin. When BPL was topically applied 1 - 6 times as the undiluted compound or in corn oil or acetone solutions at individual doses of 0.8 to 100 mg, all of the mice developed skin irritation, ranging from erythema to alopecia and scarring.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: May be fatal if inhaled. Causes chemical burns to the respiratory tract. At concentrations > 0.1 mg/l in air, the odor of beta-propiolactone is unbearable to humans. (HAZARDTEXT)
Chronic: Possible cancer hazard based on tests with laboratory animals. Chronic exposure may cause liver damage. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Dose-related increases in papillomas and carcinomas have been reported in mice following lifetime skin-painting studies with

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 imme diately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. SPEED IS ESSENTIAL, OBTAIN MEDICAL AID IMMEDIATELY. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Combustible liquid and vapor.
Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.
Flash Point: 70 deg C (158.00 deg F)
Autoignition Temperature: Not applicable.
Explosion Limits, Lower:2.90 vol %
Upper: Not available.
NFPA Rating: (estimated) Health: 4; Flammability: 2; Instability: 2

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Evacuate unnecessary personnel. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.
Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a dry area. Deep freeze (below -20癈). Store protected from light. Store under argon.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
?Propiolactone	0.5 ppm TWA	none listed	(Cancer suspect agent -

			see 29 CFR 1910.1003)

OSHA Vacated PELs: ?Propiolactone: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
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. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless
Odor: strong, pungent - sweetish odor
pH: Not available.
Vapor Pressure: 3 mbar @ 20 deg C
Vapor Density: 2.5 (air=1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 162 deg C @ 760 mmHg
Freezing/Melting Point:-33 deg C
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density:1.146
Molecular Formula:C3H4O2
Molecular Weight:72.06

Section 10 - Stability and Reactivity

Chemical Stability: May undergo autopolymerization. Substance is readily hydrolyzed.
Conditions to Avoid: Light, ignition sources, moisture, heat.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, strong acids, acetates, halogens, thiocyanates, 2-aminoethanol, ammonium hydroxide, aniline, chlorosulfonic acid, ethylene diamine, ethyleneimine, hydrochloric acid, hydrofluoric acid, nitric acid, oleum, pyridine, sodium hydroxide, sulfuric acid.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 57-57-8: RQ7350000
LD50/LC50:
CAS# 57-57-8:
Inhalation, rat: LC50 = 25 ppm/6H;
.
The 30-minute LC50 value of BPL in rats was approximately 250 ppm. (Documentation of the TLV - 7th edition.)
Carcinogenicity:

CAS# 57-57-8:

- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **California:** carcinogen, initial date 1/1/88
- **NTP:** Suspect carcinogen
- **IARC:** Group 2B carcinogen

Epidemiology: IARC Group 2B: Proven animal carcinogenic substance of potential relevance to humans.ACGIH has labeled this substance as a confirmed animal carcinogen.Tumorigenic effects have been reported in experimental animals.
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information available.
Physical: No information available.
Other: Do not empty into drains.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US 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.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC LIQUIDS, ORGANIC, N.O.S.	TOXIC LIQUIDS, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN2810	UN2810
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 57-57-8 is listed on the TSCA inventory.
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.

CERCLA Hazardous Substances and corresponding RQs

CAS# 57-57-8: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 57-57-8: 500 lb TPQ

SARA Codes

CAS # 57-57-8: immediate, delayed, fire, reactive.

Section 313

This material contains ?Propiolactone (CAS# 57-57-8, 98%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 57-57-8 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

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

CAS# 57-57-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains ?Propiolactone, a chemical known to the state of California to cause cancer.
California No Significant Risk Level: CAS# 57-57-8: 0.05 鎔/day NSRL

European / International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T+

Risk Phrases:

R 26 Very toxic by inhalation.
R 36/38 Irritating to eyes and skin.
R 45 May cause cancer.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.

WGK (Water Danger / Protection)

CAS# 57-57-8: No information available.

Canada - DSL / NDSL

CAS# 57-57-8 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of B3, D1A, E.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 57-57-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 3/06/2000
Revision #6 Date: 8/05/2008

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 event shall Fisher 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 Fisher has been advised of the possibility of such damages.