



Material Safety Data Sheet

NFPA 	HMIS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; font-weight: bold;">3</td> </tr> <tr> <td style="background-color: #FFC0CB;">Fire Hazard</td> <td style="text-align: center; font-weight: bold;">2</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> </table>	Health Hazard	3	Fire Hazard	2	Reactivity	0	Personal Protective Equipment  See Section 15.
Health Hazard	3							
Fire Hazard	2							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/Trade Name	Propionic acid	Catalog Number(s). P1326, YY913, P1464, PR125 CAS# 79-09-4 RTECS UE5950000 TSCA TSCA 8(b) inventory: Propionic acid CI# Not available.
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000
Commercial Name(s)	Luprosil; Propionic acid grain preserver; Prozoim; Pseudoacetic acid; Sentry grain preserver; Tenox P grain preserver	
Synonym	Propanoic acid; Carboxyethane; Ethanecarboxylic acid; Ethylformic acid; Metacetic acid; Methyl acetic acid	
Chemical Name	Propionic acid	
Chemical Family	Not available.	
Chemical Formula	CH ₃ CH ₂ COOH	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Propionic acid	79-09-4	10	15		100
Toxicological Data on Ingredients					
Propionic acid: ORAL (LD50): Acute: 2600 mg/kg [Rat]. 5160 mg/kg [Rat]. 5100 mg/kg [Mouse]. DERMAL (LD50): Acute: 500 mg/kg [Rabbit].					

Section 3. Hazards Identification	
Potential Acute Health Effects	Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

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Potential Chronic Health Effects	Slightly hazardous in case of skin contact (sensitizer), of inhalation (lung irritant, lung sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs, upper respiratory tract, skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
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Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	465°C (869°F) - 513 C.
Flash Points	CLOSED CUP: 51°C (123.8°F) - 54 C. OPEN CUP: 57°C (134.6°F) - 58 C..
Flammable Limits	LOWER: 2.6% - 2.9% UPPER: 12% - 17%
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks, of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill	Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, alkalis.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 10 (ppm) from ACGIH (TLV) [United States] TWA: 10 (ppm) from OSHA (PEL) [United States] TWA: 10 STEL: 15 from NIOSH [United States] TWA: 30 STEL: 45 (mg/m ³) from NIOSH [United States] TWA: 30 (mg/m ³) from OSHA (PEL) [United States] TWA: 10 STEL: 15 (ppm) [United Kingdom (UK)] TWA: 31 STEL: 46 (mg/m ³) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Pungent. Disagreeable. Rancid (Slight.)
Molecular Weight	74.08 g/mole	Taste	Sour and mildly cheese-like
pH (1% soln/water)	2 -3 [Acidic.]	Color	Not available.
Boiling Point	141°C (285.8°F)		
Melting Point	-21°C (-5.8°F)		
Critical Temperature	339.5°C (643.1°F)		
Specific Gravity	0.993 - 0.998 (Water = 1)		
Vapor Pressure	0.3 kPa (@ 20°C 3.53 mm Hg @ 25 C.		
Vapor Density	2.56 (Air = 1)		
Volatility	Not available.		
Odor Threshold	0.16 ppm		

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Water/Oil Dist. Coeff.	The product is more soluble in oil; $\log(\text{oil}/\text{water}) = 0.3$
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water, diethyl ether.
Solubility	Soluble in cold water, diethyl ether. Slightly soluble in chloroform. Soluble in alcohol.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources, incompatible materials.
Incompatibility with various substances	Reactive with oxidizing agents, alkalis.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Corrosive to steel
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation.
Toxicity to Animals	Acute oral toxicity (LD50): 2600 mg/kg [Rat]. Acute dermal toxicity (LD50): 500 mg/kg [Rabbit].
Chronic Effects on Humans	May cause damage to the following organs: lungs, upper respiratory tract, skin.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation (lung corrosive). Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive).
Special Remarks on Toxicity to Animals	Lethal Dose/Conc 50% Kill: LD50 [Rabbit] - Route: Skin; Dose 500 ul/kg
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Corrosive. Causes severe irritation and burns. Harmful if absorbed through skin and can result in systemic effects. Eyes: Corrosive. Causes severe irritation and burns. May result in corneal injury. Inhalation: Inhalation of mist or vapor can cause nausea, vomiting, respiratory tract irritation with burning pain in the nose and throat, coughing, wheezing, shortness of breath, pulmonary edema. It can also cause chemical burns to the respiratory tract. Inhalation of vapors may cause dizziness or suffocation. It may affect behavior/central nervous system (symptom similar to ingestion), cardiovascular system, blood. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. Ingestion: Corrosive: Causes digestive tract burns. May cause severe and permanent damage to the digestive tract. Symptoms may include immediate pain, swelling of the throat, nausea, vomiting. It may also affect behavior/central nervous system (convulsions/seizures, excitation, depression, somnolence, and possible coma), blood (reduction of the number of red blood cells), cardiovascular system. Chronic Potential Health Effects: Inhalation: Prolonged or repeated may cause lung irritation or bronchitis with cough, phlegm, shortness of breath. It may also cause an asthma-like reaction with coughing, wheezing, chest tightness and/or shortness of breath. Skin: Repeated or prolonged skin contact may cause defatting and dermatitis.



Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	Class 8: Corrosive material CLASS 3: Flammable liquid.
Identification	UNNA: 3463 : Propionic acid PG: II
Special Provisions for Transport	Not available.
DOT (Pictograms)	 

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	<p>Connecticut hazardous material survey.: Propionic acid Illinois toxic substances disclosure to employee act: Propionic acid Illinois chemical safety act: Propionic acid New York release reporting list: Propionic acid Rhode Island RTK hazardous substances: Propionic acid Pennsylvania RTK: Propionic acid Minnesota: Propionic acid Massachusetts RTK: Propionic acid Massachusetts spill list: Propionic acid New Jersey: Propionic acid New Jersey spill list: Propionic acid Louisiana RTK reporting list: Propionic acid California Director's List of Hazardous Substances: Propionic acid TSCA 8(b) inventory: Propionic acid CERCLA: Hazardous substances.: Propionic acid: 5000 lbs. (2268 kg) FDA: Direct Food Additives GRAS list (21CFR 184): Listed as Propionic Acid FDA: Everything Added to Food in the United States (EAFUS) List: Listed as Propionic acid FEMA: Generally Recognized as Safe List: Listed as Propionic Acid</p>
California Proposition 65 Warnings	<p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.</p>
Other Regulations	

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OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 201-176-3).
 Canada: Listed on Canadian Domestic Substance List (DSL).
 China: Listed on National Inventory.
 Japan: Listed on National Inventory (ENCS).
 Korea: Listed on National Inventory (KECI).
 Philippines: Listed on National Inventory (PICCS).
 Australia: Listed on AICS.
 IATA (International Air Transport Association) Transportation of Dangerous Goods Regulation: Propionic Acid >90%: UN3463, Hazard Class 8, subsidiary hazard class 3, PGI


Other Classifications

WHMIS (Canada)	CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid.
DSCL (EEC)	R34- Causes burns. S23- Do not breathe gas/fumes/vapour/spray [***] S36- Wear suitable protective clothing. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	2
Reactivity	0
Personal Protection	0

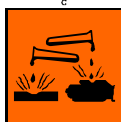
National Fire Protection Association (U.S.A.)

Health  Flammability
 Reactivity
 Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves.



Full suit.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Face shield.

Section 16. Other Information**MSDS Code** P4710**References** Not available.

Other Special Considerations Uses: Chemical intermediate for calcium, sodium propionates, cellulose propionate plastics, plasticizers, pharmaceuticals; chemical intermediate for the herbicides Dalapon, Erbon, Propanil; grain preservative; electroplating additives; emulsifying agents; baked goods to suppress bacteria, synthetic flavor ingredients; flavor useful in cheese, butter flavors, apple; added to change or maintain active acidity or basicity in buffers, acids, alkalis, and neutralizing agents; esterifying agent; in manufacture of ester solvents, fruit flavors, and perfume bases

Validated by Sonia Owen on 7/31/2007.

Verified by Sonia Owen.

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CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.