



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;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	Personal Protective Equipment  See Section 15.
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/Trade Name	Pyruvic Aldehyde, 40 wt% Solution in Water	Catalog Number(s). P2188 CAS# Mixture. RTECS UZ0700000 TSCA TSCA 8(b) inventory: Pyruvic Aldehyde, 40 wt% Solution in Water 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)	Not available.	
Synonym	1-Ketopropionaldehyde; 2-Ketopropionaldehyde; 2-Oxopropanal; Acetylformaldehyde; Acetylformyl; alpha-Ketopropionaldehyde; Glyoxal, methyl; Propanal, 2-oxo-; Propanedione; Propanolone; Propionaldehyde, 2-keto; Propionaldehyde, 2-oxo-; Pyroracemic aldehyde; Methylglyoxal	
Chemical Name	Pyruvaldehyde	
Chemical Family	Not available.	
Chemical Formula	C3-H4-O2	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Pyruvic Aldehyde	78-98-8				100
Toxicological Data on Ingredients					
Pyruvic Aldehyde: ORAL (LD50): Acute: 1165 mg/kg [Rat].					

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Pyruvic Aldehyde]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Pyruvic Aldehyde]. Mutagenic for bacteria and/or yeast. [Pyruvic Aldehyde]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.

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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.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
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.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Non-explosive in presence of open flames and sparks, of shocks.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
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. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions	Keep locked up.. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. 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	Keep container tightly closed. Keep container in a cool, well-ventilated area.

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.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
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	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid. (Viscous liquid.)	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Clear. Slightly Brown.
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	1.108 - 1.17(Water = 1)		
Vapor Pressure	Not available.		
Vapor Density	2.48 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Easily soluble in cold water, hot water.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents, alkalis.
Corrosivity	Not available.

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Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 1165 mg/kg [Rat].
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Pyruvic Aldehyde]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Pyruvic Aldehyde]. Mutagenic for bacteria and/or yeast. [Pyruvic Aldehyde].
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	Not available.

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	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

TSCA 8(b) inventory: Pyruvic Aldehyde

California Proposition 65 Warnings

Other Regulations

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications

WHMIS (Canada)

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)

R22- Harmful if swallowed.
R36- Irritating to eyes.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36- Wear suitable protective clothing.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	h

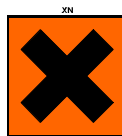
National Fire Protection Association (U.S.A.)

Health	2	0	0	Flammability
				Reactivity
				Specific hazard

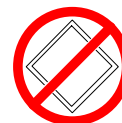
WHMIS (Canada) (Pictograms)



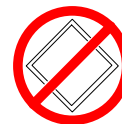
DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves.



Lab coat.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent.



Splash goggles.

Section 16. Other Information

MSDS Code P0099

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 7/14/2003.

Verified by Sonia Owen.

Printed 9/25/2003.

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.