SUVCHEM
LABORATORY CHEMICALS

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MATERIAL SAFETY DATA SHEET (MSDS)

PROPIONALDEHYDE (FOR SYNTHESIS)

1 - Chemical Product

MSDS Name:Propionaldehyde
Synonym:Propana

Cas NO: 123-38-6

Product Coad: SS0118302500

Molecular Formula: C3H6O
Molecular Weight: 58.08

2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
123-38-6	Propionaldehyde	99+	204-623-0

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Highly flammable. Harmful if swallowed. Irritating to eyes, respiratory system and skin.Air sensitive.Stench.
Potential Health Effects
Eye:Causes severe eye irritation. May cause chemical conjunctivitis.
Skin:Causes mild skin irritation.
Ingestion:May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
Inhalation:Causes respiratory tract irritation. Vapors may cause dizziness or suffocation. Can produce delayed pulmonary edema.
Chronic:Effects may be delayed. Laboratory experiments have resulted in mutagenic effects.

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.
Skin:Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Remove contaminated clothing and shoes.
Ingestion:Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:Treat symptomatically and supportively.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Extremely flammable liquid and vapor. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire.
Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Will be easily ignited by heat, sparks or flame.
Extinguishing Media:For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water.

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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.
Place under an inert atmosphere. A vapor suppressing foam may be used to reduce vapors.

7 - HANDLING and STORAGE

Handling:Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Handle under an inert atmosphere. Store protected from air. This product may be under pressure; cool before opening. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

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Storage:Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Flammables-area. Keep refrigerated. (Store below 4C/39F.) Do not expose to air. Store under an inert atmosphere.

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 general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits CAS# 123-38-6: Russia: 5 mg/m3 TWA 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:A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: colorless
Odor: none reported
pH: Not available.
Vapor Pressure: 317 mm Hg @ 25 deg C
Viscosity: 0.47 cP @ 10 deg C
Boiling Point: 49 deg C
Freezing/Melting Point: -81 deg C
Autoignition Temperature: 206 deg C (402.80 deg F)
Flash Point: -40 deg C (-40.00 deg F)
Explosion Limits, lower: 2.6 vol %
Explosion Limits, upper: 17 vol %
Decomposition Temperature:
Solubility in water: Soluble.
Specific Gravity/Density: 0.8100 g/cm3

10 - STABILITY AND REACTIVITY

Chemical Stability:Polymerization may occur in the presence of acids and caustics.
Conditions to Avoid:Incompatible materials, ignition sources, exposure to air, excess heat, strong oxidants.
Incompatibilities with Other Materials:Oxidizing agents, strong reducing agents, acids, strong bases, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), air, methyl methacrylate.
Hazardous Decomposition Products:Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.Hazardous Polymerization: May occur.

11 - TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 123-38-6: UE0350000 LD50/LC50:
CAS# 123-38-6: Dermal, guinea pig: LD50 = 10 mL/kg; Draize test, rabbit, eye: 41 mg Severe; Draize test, rabbit, eye:

20 mg/24H Moderate; Inhalation, mouse: LC50 = 21800 mg/m3/2H; Inhalation, mouse: LC50 = 21800 mg/m3/2H; Oral, rat: LD50 = 1410 mg/kg; Oral, rat: LD50 = 1410 mg/kg; Skin, rabbit: LD50 = 2460 mg/kg.

Carcinogenicity:Propionaldehyde - Not listed by ACGIH, IARC, or NTP.
Other:See actual entry in RTECS for complete information.

12 - ECOLOGICAL INFORMATION

Ecotoxicity:In terrestrial and aquatic environments, propionaldehyde will biodegrade to its corresponding carboxylic acid, which then undergoes mineralization. Volatilization from soil and water is also expected to be significant.

13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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14 - TRANSPORT INFORMATION

IATA
Shipping Name: PROPIONALDEHYDE
Hazard Class: 3
UN Number: 1275
Packing Group: II
IMO
Shipping Name: PROPIONALDEHYDE
Hazard Class: 3
UN Number: 1275
Packing Group: II
RID/ADR
Shipping Name: PROPIONALDEHYDE
Hazard Class: 3
UN Number: 1275
Packing group: II
USA RQ: CAS# 123-38-6: 1000 lb final RQ; 45.4 kg final RQ

15 - REGULATORY INFORMATION

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN F
Risk Phrases:
R 11 Highly flammable.
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system
and skin.
Safety Phrases:
S 9 Keep container in a well-ventilated place.
S 16 Keep away from sources of ignition - No
smoking.
S 29 Do not empty into drains.
WGK (Water Danger/Protection)
CAS# 123-38-6: 1
Canada
CAS# 123-38-6 is listed on Canada's DSL List.
CAS# 123-38-6 is listed on Canada's Ingredient Disclosure List.
US FEDERAL
TSCA CAS# 123-38-6 is listed on the TSCA inventory.

16: Other Information

References: Laboratory Reagent

In accordance with REACH Regulation (CE) Nº 1907/2006 and with CLP Regulation (CE) Nº 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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