

Material Safety Data Sheet

Propionaldehyde, 99+%

ACC# 00047

Section 1 - Chemical Product and Company Identification

MSDS Name: Propionaldehyde, 99+%**Catalog Numbers:** AC220510000, AC220511000, AC418380000, AC418381000, AC418385000**Synonyms:** Propanal**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
123-38-6	Propionaldehyde	99+	204-623-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Flash Point: -40 deg C.

Danger! Extremely flammable liquid. Causes respiratory tract irritation. Causes eye and skin irritation. Stench. May cause digestive tract irritation. May be harmful if swallowed. Air sensitive.**Target Organs:** No data found.**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.

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.**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.

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. 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.

Flash Point: -40 deg C (-40.00 deg F)

Autoignition Temperature: 206 deg C (402.80 deg F)

Explosion Limits, Lower: 2.6 vol %

Upper: 17 vol %

NFPA Rating: (estimated) Health: 2; Flammability: 3; 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. 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.

Section 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.

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 4°C/39°F.) Do not expose to air. Store under an inert atmosphere.

Section 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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Propionaldehyde	20 ppm TWA	none listed	none listed

OSHA Vacated PELs: Propionaldehyde: 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: 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 a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: none reported

pH: Not available.

Vapor Pressure: 317 mm Hg @ 25 deg C

Vapor Density: 2.00

Evaporation Rate: Not available.

Viscosity: 0.47 cP @ 10 deg C

Boiling Point: 49 deg C

Freezing/Melting Point: -81 deg C

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: 0.8100 g/cm³

Molecular Formula: C₃H₆O

Molecular Weight: 58.08

Section 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.

Section 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:

CAS# 123-38-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.**Teratogenicity:** No information available.**Reproductive Effects:** No information available.**Neurotoxicity:** No information available.**Mutagenicity:** Unscheduled DNA Synthesis: Rat, Liver = 30 umol/L.; Mutation in Mammalian Somatic Cells: Hamster, Lung = 10 mmol/L.; DNA Damage: Mammal - species unspecified Lymphocyte = 100 mmol/L.**Other Studies:** Open irritation test: Administration onto the skin (rabbit) = 500 mg (Mild). Standard Draize Test: Administration into the eye (rabbit) = 20 mg/24H (Moderate). Standard Draize Test: Administration into the eye (rabbit) = 41 mg (Severe).

Section 12 - Ecological Information

Ecotoxicity: No data available. 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.**Environmental:** In the atmosphere, propionaldehyde exists almost entirely in the vapor-phase and reactions with photochemically generated hydroxyl radicals should be important (average half-life of 19.6 hrs). Removal by wet deposition can also occur.**Physical:** No information available.**Other:** No information available.

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:	PROPIIONALDEHYDE	PROPIIONALDEHYDE
Hazard Class:	3	3
UN Number:	UN1275	UN1275
Packing Group:	II	II
Additional Info:		FLASHPOINT -40 C

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 123-38-6 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# 123-38-6: 1000 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 123-38-6: acute, chronic, flammable, reactive.

Section 313

This material contains Propionaldehyde (CAS# 123-38-6, 99+%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 123-38-6 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# 123-38-6 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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 16 Keep away from sources of ignition - No smoking.

S 29 Do not empty into drains.

S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 123-38-6: 1

Canada - DSL/NDSL

CAS# 123-38-6 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D2B.

Canadian Ingredient Disclosure List

CAS# 123-38-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 8/24/1997

Revision #6 Date: 3/18/2003

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.