

## SAFETY DATA SHEET

Preparation Date: 12/29/2016

Revision Date: 12/29/2016

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** P1432  
**Product Name:** PROPIONALDEHYDE

**Other means of identification**

**Synonyms:** Aldehyde propionique (French)  
 Methylacetaldehyde  
 Propionaldehyde  
 Propaldehyde  
 Propanal  
 Propanaldehyde  
 Propional  
 Propionaldehyde (natural)  
 Propionic aldehyde  
 Propyl aldehyde  
 Propylaldehyde  
 Propylic aldehyde  
 n-Propanal  
 NCI-C61029

**CAS #:** 123-38-6  
**RTECS #** UE0350000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Manufacture of plastics. Rubber chemicals. Disinfectant. Preservative. For manufacturing or laboratory use only.  
**Uses advised against** Not for food or drug use.

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000.

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300

**Contact Person:** Martin LaBenz (West Coast)

**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)


Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

**Label elements**

**Danger**

**Hazard statements**  
Harmful if swallowed  
Harmful if inhaled  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
Highly flammable liquid and vapor



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

May be harmful in contact with skin  
Harmful to aquatic life with long lasting effects  
Harmful to aquatic life

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Take precautionary measures against static discharge  
Do not eat, drink or smoke when using this product  
Wear protective gloves  
Wear eye/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

Call a *POISON CENTER* or doctor/physician if you feel unwell  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
If skin irritation occurs: Get medical advice/attention  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF SWALLOWED: Rinse mouth.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Propionaldehyde	123-38-6	100

### 4. FIRST AID MEASURES

#### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

#### Most important symptoms and effects, both acute and delayed

- Symptoms** Causes serious eye irritation. Causes skin irritation. May cause irritation of respiratory tract. Redness and burning sensation on skin. Skin rash. Harmful by inhalation and if swallowed. May be harmful in contact with skin.

#### Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

#### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

- Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray, mist, or foam.

- Unsuitable Extinguishing Media:** No information available.

#### Specific hazards arising from the chemical

- Hazardous Combustion Products:** Carbon Oxides.

- Specific hazards:** Highly flammable. May be ignited by heat, sparks or flames. Vapors from liquefied gas are initially heavier than air and spread along ground. Forms explosive mixtures with air at ambient temperatures. When heated to decomposition it emits toxic gases and irritating fumes.

#### Special Protective Actions for Firefighters

<b>Specific Methods:</b>	No information available.
<b>Special Protective Equipment for Firefighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Pay attention to flashback. Use spark-proof tools and explosion-proof equipment. Remove all sources of ignition. Take precautionary measures against static discharges. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Keep at temperatures between 2 and 8 °C. Keep away from heat and sources of ignition. Store away from incompatible materials. Store in a segregated and approved area.

**Incompatible Materials:**

- Oxidizing agents
- Methyl methacrylate
- Strong acids
- Amines
- Caustics
- Reducing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

## National occupational exposure limits

### United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Propionaldehyde	123-38-6	None	None	= 20 ppm TWA	= 20 ppm TWA

### Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Propionaldehyde	123-38-6	= 20 ppm TWA = 48 mg/m <sup>3</sup> TWA	= 20 ppm TWA	20 ppm TWA	None

### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Propionaldehyde	123-38-6	None	None

## Appropriate engineering controls

### Engineering measures to reduce exposure:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

## Individual protection measures, such as personal protective equipment

### Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> Suffocating.	<b>Taste</b> No information available.	<b>Formula:</b> C <sub>3</sub> H <sub>6</sub> O
<b>Molecular/Formula weight:</b> 58.08 g/mol	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> -22°C
<b>Flashpoint (°C/°F):</b> -22°C/ -30°F	<b>Flash Point Tested according to:</b> Closed cup	<b>Autoignition Temperature (°C/°F):</b> 207°C/ 404.6°F
<b>Lower Explosion Limit (%):</b> 2.6%	<b>Upper Explosion Limit (%):</b> 17%	<b>Melting point/range(°C/°F):</b> -81°C/ -113.8°F
<b>Decomposition temperature(°C/°F):</b> No information available	<b>Boiling point/range(°C/°F):</b> 46-50°C/ 115-122°F	<b>Bulk density:</b> No information available

**Density (g/cm<sup>3</sup>):**  
No information available

**Specific gravity:**  
0.8071

**pH:**  
No information available

**Vapor pressure @ 20°C (kPa):**  
34.3

**Evaporation rate:**  
No information available

**Vapor density:**  
2

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
0.145

**Partition coefficient (n-octanol/water):**  
No information available

**Viscosity:**  
0.3167 cP @ 26.7°C

**Miscibility:**  
No information available

**Solubility:**  
Soluble in Water  
Soluble in Chloroform  
Easily soluble in methanol  
Easily soluble in diethyl ether  
Easily soluble in acetone

## 10. STABILITY AND REACTIVITY

### Reactivity

Reacts vigorously with oxidizing agents  
Reactive with methyl methacrylate under certain conditions of mixing, lead to a rapid exothermic reaction  
Reactive with strong acids and amines  
Strong caustics and reducing agents can cause explosives polymerization

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Polymerization may occur in presence of acids and caustics. Vigorous polymerization reaction with methyl methacrylate

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Decomposes on exposure to light.

**Incompatible Materials:**  
Oxidizing agents  
Methyl methacrylate  
Strong acids  
Amines  
Caustics  
Reducing agents

**Hazardous decomposition products:** Carbon oxides. Peroxides.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Eyes. Ingestion. Inhalation.

### Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document

**Product code:** P1432

**Product name:** PROPIONALDEHYDE

## Component Information

Propionaldehyde	
CAS-No.	123-38-6

**LD50/oral/rat** = 1410 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = 2460 mg/kg  
**LD50/dermal/rat** = 1410mg/kgOral LD50Rat  
**LC50/inhalation/rat** = 26000 ppm 30 min  
**LC50/inhalation/mouse** = 21.8 mg/ml 2 h  
**Other LD50 or LC50information** = No information available

## Product Information

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = 1410 mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = 2460 mg/kg

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = 26000 ppm  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = 21.8 mg/ml  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

## Symptoms

**Skin Contact:** Causes skin irritation. May be harmful in contact with skin.

**Eye Contact:** Causes serious eye irritation.

**Inhalation** Causes respiratory tract (nose, throat) irritation with cough. May cause nausea, vomiting, headache, diarrhea. May cause irritation of the mucous membranes and upper respiratory tract. Harmful by inhalation.

**Ingestion** May cause gastrointestinal tract irritation with nausea, vomiting, and diarrhea. May affect behavior/central nervous system (convulsions/seizures, somnolence), respiration(dyspnea). Harmful if swallowed.

**Aspiration hazard** No information available.

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** No information available.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Propionaldehyde	123-38-6	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

### Specific Target Organ Toxicity

**STOT - single exposure** Respiratory Tract.

**STOT - repeated exposure** No information available.

**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

*Propionaldehyde - 123-38-6*

**Freshwater Algae Data:** 260 mg/L EC50 *Desmodesmus subspicatus* 72 h  
40 mg/L EC50 *Pseudokirchneriella subcapitata* 96 h  
58 mg/L EC50 *Pseudokirchneriella subcapitata* 72 h

**Freshwater Fish Species Data:** 130 mg/L LC50 *Lepomis macrochirus* 96 h static 1

14 mg/L LC50 *Pimephales promelas* 96 h static 1

**Water Flea Data:** 88.7 mg/L EC50 *Daphnia magna* 48 h

**Persistence and degradability:** Readily biodegradable  
95% (BOD)

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

#### **Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

#### **Contaminated packaging:**



Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Propionaldehyde	123-38-6	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Class:** No information available  
**Packing group:** II  
**Emergency Response Guide Number:** 129  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** IB2, T7, TP1  
**Symbol(s):** [DOT]: (R4) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 1000 pounds (454 Kilograms).  
**Description:** UN1275, Propionaldehyde, 3, II

### TDG (Canada)

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No Information available  
**Description:** UN1275, Propionaldehyde, 3, II

### ADR

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Packing Group:** II  
**Subsidiary Risk:** No information available  
**Description:** UN1275, Propionaldehyde, 3, II

### IMO / IMDG

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No information available  
**EMS:** F-E  
**Description:** UN1275, Propionaldehyde, 3, II

### RID

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** UN1275, Propionaldehyde, 3, II

### ICAO

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** UN1275, Propionaldehyde, 3, II

**IATA**

**UN-No:** UN1275  
**Proper Shipping Name:** Propionaldehyde  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**ERG Code:** 3H  
**Special Provisions** No information available  
**Description:** UN1275, Propionaldehyde, 3, II

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Propionaldehyde	123-38-6	Present	Present KE-29254	Present	Present (2)-486	Present	Present	Present 204-623-0

**U.S. Regulations**

*Propionaldehyde*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 1598  
**New Jersey (EHS) List:** 1598 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Pennsylvania RTK - Special Hazardous Substances** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 = 1 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** Listed

**FDA - Direct Food Additives** 21 CFR 172.515  
**FDA - 21 CFR - Total Food Additives** 172.515

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Propionaldehyde	123-38-6	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Propionaldehyde	123-38-6	= 454 kg final RQ	None	None	None	1.0 % de minimis concentration

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Propionaldehyde	123-38-6	Not Applicable	09/30/199106/30/1998

## Canada

### WHMIS hazard class:

B2 Flammable liquid  
D2B Toxic materials

### Components Propionaldehyde

**WHIMHAZ**  
B2 D2B

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Propionaldehyde	1 %

## Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Propionaldehyde	123-38-6	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Propionaldehyde	123-38-6	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Propionaldehyde	123-38-6	Not listed

## EU Classification

### R-phrase(s)

R11 - Highly flammable.  
R20 - Harmful by inhalation.  
R22 - Harmful if swallowed.  
R36/37/38 - Irritating to eyes, respiratory system and skin.

### S -phrase(s)

S 2 - Keep out of the reach of children.  
S 9 - Keep container in a well-ventilated place.  
S16 - Keep away from sources of ignition - No smoking.  
S29 - Do not empty into drains.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Propionaldehyde	123-38-6	F; R11 Xi; R36/37/38	No information	S2 S9 S16 S29

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:

F - Highly flammable.  
Xi - Irritant.  
Xn - Harmful.

**F****Xi****Xn**

## 16. OTHER INFORMATION

**Preparation Date:** 12/29/2016  
**Revision Date:** 12/29/2016  
**Prepared by:** Roumann Pangilinan

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) 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 SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. 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 SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**