Section 1 - Product and Company Information

Product Name                  PROPYL ACETATE, 99.5+%  
Product Number                537438  
Brand                         SIAL  
Company                       Sigma-Aldrich Canada, Ltd  
Address                       2149 Winston Park Drive  
                              Oakville ON L6H 6J8 CA  
Technical Phone:              9058299500  
Fax:                          9058299292  
Emergency Phone:             800-424-9300

Section 2 - Composition/Information on Ingredient

Substance Name                CAS #                SARA 313
PROPYL ACETATE                109-60-4             No

Formula                      C5H10O2
Synonyms                      Acetate de propyle normal (French) * Acetic acid  
n-propyl ester * 1-Acetoxypropane * Octan propylu  
(Polish) * Propyl acetate * n-Propyl acetate *  
1-Propyl acetate * n-Propyl acetate (ACGIH:OSHA)  
* Propylester kyseliny octove (Czech)
RTECS Number:                AJ3675000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Flammable (USA) Highly Flammable (EU). Irritant.  
Irritating to eyes, respiratory system and skin.

HMIS RATING
HEALTH: 1  
FLAMMABILITY: 4  
REACTIVITY: 0

NFPA RATING
HEALTH: 1  
FLAMMABILITY: 4  
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is  
conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give  
artificial respiration. If breathing is difficult, give oxygen.
DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS
Flammable Hazards: Yes

EXPLOSION HAZARDS
Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

FLASH POINT
57.2 °F  14 °C   Method: closed cup

EXPLOSION LIMITS
Lower: 1.7 %   Upper: 8 %

AUTOIGNITION TEMP
450 °C

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage
HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS
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<th>Type</th>
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Section 9 - Physical/Chemical Properties

Appearance
- Physical State: Clear liquid
- Color: Colorless

Property | Value | At Temperature or Pressure
--- | --- | ---
Molecular Weight | 102.13 AMU | |
pH | N/A | |
BP/BP Range | 99.0 - 102.0 °C | |
MP/MP Range | - 95.0 °C | |
Freezing Point | - 95.0 °C | |
Vapor Pressure | 25 mmHg | 20 °C |
Vapor Density | 3.5 g/l | |
Saturated Vapor Conc. | N/A | |
SG/Density | 0.887 g/cm³ | |
Bulk Density            N/A
Odor Threshold          N/A
Volatile%               N/A
VOC Content             N/A
Water Content           N/A
Solvent Content         N/A
Evaporation Rate        N/A
Viscosity               N/A
Surface Tension         24.3 mN/m          20 °C
Partition Coefficient   Log Kow: 1.23
Decomposition Temp.     N/A
Flash Point             57.2 °F 14 °C      Method: closed cup
Explosion Limits        Lower: 1.7 %
                         Upper: 8 %
Plammability            N/A
Autoignition Temp       450 °C
Refractive Index        1.384
Optical Rotation        N/A
Miscellaneous Data      N/A
Solubility              Solubility in Water: soluble
                         Other Solvents: MISCIBLE WITH KETONES , ESTERS, HYDROCARBONS ALCOHOL,

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions to Avoid: Moisture. Heat.
Materials to Avoid: Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Multiple Routes: Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption.

SIGNS AND SYMPTOMS OF EXPOSURE
Prolonged exposure can cause: Narcotic effect.

TOXICITY DATA

Oral
Rat
9370 mg/kg
LD50

Oral
Mouse
8300 mg/kg
LD50
Skin and Appendages: Other: Hair.

Intraperitoneal
Mouse
1420 MG/KG
LD50

Oral
Rabbit
6640 mg/kg
LD50

Skin
Rabbit
>20 ML/KG
LD50

IRRITATION DATA

Skin
Rabbit
500 mg
Remarks: Open irritation test

Eyes
Rabbit
500 mg
24H
Remarks: Mild irritation effect

Section 12 - Ecological Information

ACUTE ECOTOXICITY TESTS

Test Type: EC50 Algae
Time: 24 h
Value: > 1,000 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 24 h
Value: 318 mg/l

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: 96 h
Value: 56.0 - 64.0 mg/l

Test Type: LC50 Fish
Species: Leuciscus idus
Time: 48 h
Value: 97.0 - 194.0 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.
Section 14 - Transport Information

DOT
Proper Shipping Name: n-Propyl acetate
UN#: 1276
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA
Proper Shipping Name: n-Propyl acetate
IATA UN Number: 1276
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION
Symbol of Danger: F-Xi
Indication of Danger: Highly Flammable. Irritant.
R: 11-36-66-67
Risk Statements: Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.
S: 16-26-29-33
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not empty into drains. Take precautionary measures against static discharges.

US CLASSIFICATION AND LABEL TEXT
Risk Statements: Irritating to eyes, respiratory system and skin.
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to