

# 1. PRODUCT IDENTIFICATION

Name:	n-Propyl Acetate
Synonyms:	1-propyl acetate; 1-acetoxypropane; normal propyl acetate; acetic acid, propyl ester
CAS#	109-60-4
Product Uses:	Laquer, paint and ink solvent, ingredient in perfume.
Supplier Identifier:	Megaloid Laboratories Limited 5515 North Service Road, Suite 306 Burlington, Ontario, Canada L7L 6G4 Phone: 905-337-7411 / Fax: 905-337-1686

**EMERGENCY** Call CHEMTREC - (800) 424-9300 (CCN # 693764) **INFORMATION** 

# 2. HAZARDS

GHS Class (category)	Flammable (2)	Eye irritant (2B)	<b>STOT</b> (3)	
Signal Word	DANGER			
Hazard Statements	highly flammable liquid & vapour (H225)	Causes eye irritation (H320)	May cause dizziness or drowsiness (H336)	Label Pictograms

<b>GHS Precautio</b>	GHS Precautionary Statements for Labelling	
Prevention		
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.	
P240	Ground or bond container and receiving equipment.	
P241	Use explosion-proof electrical, ventilating and lighting equipment.	
P242	Use only non-sparking tools.	
P243	Take precautionary measures against static discharge.	
P262	Do not get in eyes, on skin, or on clothing.	
P264	Wash hands thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product.	

P280	Wear eye protection, protective gloves and clothing of butyl rubber
Response	
P303, P361, P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304, P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305, P351, P338	IF IN EYES: rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337, P313	If eye irritation persists: Get medical advice/ atten-tion.
P370, P378	In case of fire: Use dry sand, dry chemical or alc o-hol-resistant foam to extinguish.
Storage	
P403, P233	Store in a well-ventilated place. Keep container tightly closed.
P403, P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	
P501	Dispose of contents and container in accordance with local, regional, national and international regulations.

# 3. COMPOSITION

Chemical Name:	CAS No.	%	Other Identifiers
n-propyl acetate	109-60-4	100	EC # 203-686-1

## 4. FIRST AID

#### Inhalation

Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

#### **Skin Contact**

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

#### Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

### Ingestion

Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

**First-aid Comments** 

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

# 5. FIRE FIGHTING & FLAMMABILITY

#### **Extinguishing Media**

Suitable Extinguishing Media

Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames

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### **Combustion Products**

Carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments Cannot accumulate a static charge on agitation or pumping.

#### Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

# 6. ACCIDENTAL RELEASE MEASURES

Serious Fire Potential:

blanket spill with foam as a precaution against accidental ignition. Take extreme care to avoid sparks – do not operate (turn on OR off) electrical appliances near spill, unless explosion proof.

### Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

#### **Environmental Precautions**

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

#### Methods and Materials for Containment and Cleaning Up

Leak Precaution: dyke to control spillage and prevent environmental contamination Handling Spill: Ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal.

#### **Other Information**

Report spills to local health, safety and environmental authorities, as required.

# 7. HANDLING & STORAGE

## **Precautions for Safe Handling**

Use non-sparking bronze or aluminium hand tools. All electrical & mechanical equipment (including lighting, switchgear & fork life trucks) used with or around this product must be explosion-proof. Although this product cannot retain a static charge on agitation or transfer, its flash point is low. Ground or electrically bond the source container, receiving container & transfer pump before transferring contents. Avoid splashing by keeping the product nozzle below the surface in the receiving container. Ensure that containers, empty or full, are tightly sealed unless in use. Avoid generating or breathing product vapour. If vapour forms in use install adequate ventilation. If dealing with a spill & ventilation is impossible or impractical, wear a respirator with organic vapour cartridge. Limit contact with skin & wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

Never cut, drill, weld or grind on or near this container.

## **Conditions for Safe Storage**

Store & use in a cool, dry environment, away from sources of ignition & oxidizing agents.

# 8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV	200ppm / 830mg/m <sup>3</sup>	Ontario STEV	250ppm / 1040mg/m <sup>3</sup>
ACGIH TLV	$200 ppm / 830 mg m^3$	ACGIH STEL	250ppm / 1040mg/m <sup>3</sup>
OSHA PEL	200ppm / 830mg/ m <sup>3</sup>	OSHA STEL	250ppm / 1040mg/m <sup>3</sup>

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Ventilation	Mechanical ventilation may be required to maintain airborne titre below TWAEVM.
Hands	Probably not required; "Silver Shield" gloves are resistant – consult supplier to confirm suitability. Do NOT use vinyl (PVC), nitrile, "Viton" or neoprene!
Eyes	Safety glasses with side shields – always protect the eyes
Clothing	Use protective clothing chemically resistant to this material. Selection of specific items such as boots, apron, or full body suit will depend on the task.

## **Appropriate Engineering Controls**

Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Control static electricity discharges which includes bonding of equipment to ground. Provide eyewash and safety shower if contact or splash hazard exists.

# 9. PHYSICAL PROPERTIES

Appearance	Clear colourless liquid.
Odour	Fruity
Odour threshold	0.05 - 0.7 ppm (0.21 - 2.9 mg/m3)
рН	Neutral
Melting Point/Freezing Point	-92 °C (-134 °F) (freezing)
Initial Boiling Point/Range	102 ℃ (216 °F)
Flash Point	> 13 °C (55 °F) (closed cup)
Evaporation Rate	2.8 (Butyl Acetate =1)
Flammability ( Solid, Gas)	Not Available
Upper/Lower Flammability or Explosive Limit	8% (upper); 1.7% (lower)
Vapour Pressure	25 mm Hg (3 kPa) at 20 ℃
Vapour Density (air = 1)	3.5
Relative Density (water = 1)	0.888 at 20 ℃
Solubility	18.7 - 20.4 g/L (Slightly soluble) in water; common organic solvents.
Partition Coefficient, n-Octanol/Water (Log Kow)	1.4
Auto-ignition Temperature	450 ℃ (842 °F)
Viscosity	-0.50 – 0.58 centipoises at 20 °C (dynamic)
Physical State	Liquid

Molecular Weight 102 grams per mole

Molecular Formula C5H10O2

# **10. REACTIVITY**

**Dangerously Reactive** with strong oxidising agents, strong alkalis may cause violent hydrolysis. **Also Reactive** with strong acids, hydrazine, azo and diazo compounds; attacks certain elastomers.

Chemical Stability Stable; will not polymerize

#### **Hazardous Decomposition Products**

Decomposes in Presence of - hydrolyses in alkaline medium Decomposition Products - hydrolyses to n-propyl alcohol & acetic acid.

**Conditions to Avoid** *Heat, flames and sparks.* 

Mechanical Impact Not sensitive

# **11. TOXICITY**

Acute Toxicity LD<sub>50</sub> (oral) 8700, 9370 & 9800mg/kg (rat), 8300mg/kg (mouse), 6640mg/kg (rabbit)

LD50 (skin) >17,800mg/kg (rabbit), >8800mg/kg (guinea pig)

LC50 (inhalation) 8000ppm (rat), 9100ppm (cat), 7490ppm (rat)

**Skin Corrosion/Irritation** 

Human experience and animal tests show no or very mild irritation. Serious Eye Damage/Irritation Liquid is a mild irritant; vapour irritating above 200ppm to some people.

## STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Irritating above 200ppm; headache, dizziness, drowsiness, intoxication, shortness of breath. Skin Absorption Slight; toxic unlikely by this route.

Ingestion

100+ml has similar effects to inhalation due to hydrolysis to propanol – not a route of industrial exposure.

## STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged exposure may cause dermatitis due to drying / degreasing effect.

Respiratory and/or Skin Sensitization Not a sensitizer in humans or animals. Carcinogenicity Not a carcinogen. IARC: Not specifically listed. ACGIH®: Not specifically listed. NTP: Not specifically listed. OSHA: Not specifically listed.

## **Reproductive Toxicity**

Sexual Function and Fertility No know effect in humans or animals. Germ Cell Mutagenicity Not known to be a mutagen.

# **12. ECOLOGICAL INFORMATION**

Bioaccumulation	Rapidly eliminated from the body and is not a bioaccumulator.	
Persistence and Degradability	<b>Biodegradation -</b> Biodegrades rapidly in the presence of oxygen – 5day degradation – 62%; 10day – 70%, 20day – 78%.	
	<b>Abiotic Degradation -</b> Reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 5 days	
Mobility in soil, water	Sufficiently water soluble to move readily in soil & water.	
Aquatic Toxicity		
LC50 (Fish, 96hr)	56-64mg/litre (Pimephelas promelas), 60mg/litre (Pimephelas promelas)	
EC50 (Crustacea, 24hr)	318 & 511mg/litre (Daphnia magna), 91.5mg/litre (Daphnia magna)	
EC50 (Algae, 24hrs)	1000mg/litre ("plankton algae"*) - *mixture of several many species	
EC50 (Algae, 72hr)	672mg/litre (Pseudokirchnerella subcapitata)	
EC50 (Bacteria)	170mg/litre (Pseudomnas putida), >1000mg/litre (sewage sludge)	

# 13. DISPOSAL

Water Disposal

**Do not flush to sewer,** recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

## Containers

**Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.

Pails must be vented and thoroughly dried prior to crushing and recycling.

**IBCs** (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).

Steel containers must be inspected, pressure tested & recertified every 5 years.

# Never cut, drill, weld or grind on or near this container, even if empty

# 14. TRANSPORT CLASSIFICATION

Canada TDG	PIN	UN1276	
AND	Shipping Name	n-Propyl Acetate	
U.S.A. 49 CFR	Class & Packing Group	3, PG II	

**Marine Pollutant** 

Not a Marine Pollutant

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ERAP Required	NO	
Reportable Quantity	NO	
E R G No.	129	

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

# 15. REGULATIONS

Canada DSL	On Inventory
U.S.A. TSCA	On Inventory
Europe EINECS	On Inventory

## **Canadian Regulations**

**CEPA - National Pollutant Release Inventory (NPRI)** 

Not specifically listed.

# **U.S.A. Regulations**

**OSHA Hazard Communication Standard:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312: Fire Hazard, Acute Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103: This material does not contain any components with a CERCLA RQ.

**Pennsylvania Worker and Community Right-To-Know Act:** The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	CASRN
Propyl acetate	109-60-4

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

# **Global Inventory Status**

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
China	IECSC	Compliant
Japan	ENCS	Compliant
Korea	KECI	Compliant
Philippines	PICCS	Compliant
Taiwan	TCSCA	Compliant

# **16. OTHER INFORMATION**

NFPA RATING	Health 1	Flammability 3	Instability 0	
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Prepared for	Megaloid Laboratories Limited	by	Richard Koscher			
Preparation Date:	January 2003					
Revision Dates:	January 2006, Jan 2009, Jan 2012, Dec 2014, Oct 2017, Feb 2019					
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Key to	ACGIH® = American Conference of Governmental Industrial Hygienists					
Abbreviations	AIHA® = AIHA® Guideline Found	ation				
	HSDB® = Hazardous Substances Data Bank					
	NFPA = National Fire Protection Association					
	NIOSH = National Institute for Occupational Safety and Health					
	NTP = National Toxicology Program					
	OSHA = US Occupational Safety and Health Administration					
	RIECS® = Registry of Toxic Elle		lical Substances			
References	CHEMINFO database. Canadian	Centre for (	Dccupational Health and Safety			
	Canadian Centre for Occupational Health and Safety (CCOHS), NIOSH Pocket					
	Guide database. National Institute	e for Occupa	ational Safety and Health. Available			
	from Canadian Centre for Occupa	ational Heal	th and Safety (CCOHS). Registry of			
	I oxic Effects of Chemical Substan	nces (RIEC	(S®) database. Dassault			
	Health and Safety (CCOHS)	allable from	Canadian Centre for Occupational			
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