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### 1. IDENTIFICATION

Name: Isopropyl Acetate

Synonyms: 2- propyl acetate; 2-acetoxypropane; acetic acid, isopropyl ester & others

Product Uses: Solvent for synthetic resins, inks & coatings, ingredient in perfume

**Supplier** Megaloid Laboratories Limited **Identifier:** 5515 North Service Road # 306

Burlington, ON L7L 6G4

**EMERGENCY INFORMATION: Call CHEMTREC - (800) 424-9300** 

(CCN# 693764)

# 2. HAZARD INDENTIFICATION

GHS Class (category)	flammable (2)	eye irritant (2A)	<b>STOT</b> (3)
Signal Word	DANGER		
Hazard Statements	Highly flammable liquid and vapour (H225)	Causes serious eye irritation (H319)	May cause drowsiness or dizziness (336)

# Hazardous Pictograms



### GHS Precautionary Statements for Labelling

### Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233	Keep container tightly closed.
P240	Ground and 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.
P261	Avoid breathing mist, vapours, spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection.
Response:	
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously 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/attention.
Storage:	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
Disposal:	
P501	Dispose of contents and container in accordance with local, regional, national and international regulations.

# 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	CAS No.	% weight	Other Identifiers
Isopropyl Acetate	108-21-4	100	EC# 203-561-1

# 4. FIRST-AID MEASURES

# 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. Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

# Most important symptoms and effects, both acute and delayed

Highly flammable and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.

### Notes to physician

Treat symptomatically

#### **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 MEASURES

### **Suitable Extinguishing Media**

Alcohol-resistant foam, dry chemical, water fog / spray only to cool & dilute, product floats on water.

### **Unsuitable Extinguishing Media**

Do not use direct water stream. Water jet spreads flames

### **Specific Hazards Arising from the Product**

Carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments.

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

Firefighters must wear SCBA. Full Bunker Gear.

### **Static Charge Accumulation**

Probably cannot accumulate a static charge on agitation or pumping

### **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.

### 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so.

### 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.

### **Environmental Precautions**

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

### 7. HANDLING & STORAGE

# **Precautions for Safe Handling**

Avoid creating or breathing product vapour. If vapour is created in use, install adequate exhaust ventilation. If dealing with a spill, and ventilation is impossible or impractical, wear a suitable respirator with organic vapour cartridge. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, are tightly sealed unless in use. Always ground or electrically bond the source container, receiving container & pump before transferring contents. Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Use non-sparking bronze or aluminium hand tools. All electrical & mechanical equipment (including lighting, switchgear & forklift 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.

### **Conditions for Safe Storage**

Store in a cool, dry environment, well ventilated and away from sources of ignition and oxidising agents

# 8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV	100ppm / 417mg/m <sup>3</sup>	Ontario STEV	200ppm / 834mg/m <sup>3</sup>
AGGIH TLV	100ppm / 417mg/m <sup>3</sup>	ACGIH STEL	200ppm / 834mg/m <sup>3</sup>
OSHA PEL	250ppm / 1045mg/m <sup>3</sup>	OSHA STEL	310ppm / 1290mg/m <sup>3</sup>

Ventilation	mechanical ventilation may be required to control airborne concentrations to regulated limits; a respirator with organic vapour cartridge should be available, in case of a spill or should ventilation fail (always store respirator in an airtight container [eg: "Tupperware"] to maintain cartridge "freshness")
Hands	"Barrier", or "Silver Shield" gloves may be worn – consult supplier to confirm suitability - Do NOT use vinyl (PVC), nitrile, "Viton" or neoprene!
Eyes	safety glasses with side shields or chemical goggles – always protect eyes!
Clothing	no special protective clothing required

# 9. PHYSICAL & CHEMICAL PROPERTIES

Odour & Appearance	clear, colourless, mobile liquid with strong, pleasant fruity (pear) odour
Odour threshold	0.05ppm – 0.7ppm
рН	none – (does not liberate hydrogen ions when dissolved) NOTE: Moisture gradually hydrolyses isopropyl acetate to acetic acid. This may give rise to an acid pH.
Melting point/Freezing point	-73°C / -100°F
Initial boiling point/boiling range	90°C / 194°F
Flash point	2°C / 36°F (closed cup); also 4-5°C / 39-41°F,
<b>Evaporation rate</b> (Butyl Acetate = 1)	5
Flammability (solid; gas)	no data available
Lower flammable/explosive limit	1.8%
Upper flammable/explosive limit	8%
Vapour pressure	47 mmHg at 20°C
Vapour density (air = 1)	3.5
Relative density (water = 1)	0.872 at 20 °C / 20 °C Literature
Water Solubility	soluble
Log PO/W (Octanol/H2O partition)	1.03
Auto ignition temperature	460°C / 860°F
Decomposition temperature	not known – no decomposition expected below the Autoignition Temperature
Viscosity	0.5 centipoise (20°C / 68°F)
Conversion Factor	1ppm = 4.17g/m3
Molecular Weight	102grams per mole
Molecular Formula	C5-H10-O2

# 10. STABILITY AND REACTIVITY

# Reactivity

Dangerously Reactive with

Strong oxidising agents, strong alkalis may cause vigorous hydrolysis

Also Reactive with

Strong acids, attacks some plastics

**Chemical Stability** 

Stable under normal conditions

**Possibility of Hazardous Reactions** 

Will not polymerize

Conditions to avoid

Exposure to elevated temperatures can cause product to decompose.

**Incompatible materials** 

Strong oxidizing agents

**Hazardous decomposition products** 

Isopropyl alcohol & acetic acid

**Sensitive to Mechanical Impact** 

No

# 11. TOXICOLOGICAL INFORMATION

	Acute Toxicity
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Skin Contact	little to no effect
Skin Absorption	slight; no toxic effects possible by this route
Eye Contact	slightly irritating, will not damage eyes; vapour may be irritating above 200ppm
Inhalation	may be irritating above 200ppm in some people; headache, dizziness, drowsiness, intoxication, shortness of breath may occur at higher airborne titres
Ingestion	100+ml may have similar effects to inhalation – not a route of industrial exposure
LD <sub>50</sub> (oral)	6750, 9850, 10,400, 10,900 & 11,300mg/kg (rat), 6650mg/kg (mouse), 6945mg/kg (rabbit)
LD <sub>50</sub> (skin)	>14,400 & 17,490mg/kg (rabbit)
LC <sub>50</sub> (inhalation)	12,100ppm (rat)

# 11. TOXICITY, CONTINUED

### General

Prolonged or repeated exposure may cause dermatitis due to drying/degreasing effect

### Sensitising

Not a sensitizer in humans or animals (in 5 of 5 reports)

### Carcinogen

Not considered a carcinogen in humans or animals. IARC: Not specifically listed. ACGIH®: Not specifically designated. NTP: Not specifically listed. OSHA: Not specifically listed.

# **Key to Abbreviations**

ACGIH® = American Conference of Governmental Industrial Hygienists. IARC = International Agency for Research on Cancer. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

# **Reproductive Effect**

No known effect in humans or animals

### Mutagen

No known effect on humans or animals

### Synergistic with

Not known

# 12. ECOLOGICAL INFORMATION

Bioaccumulation	rapidly eliminated from the body and cannot a bioaccumulate
Biodegradation	biodegrades readily in the presence of oxygen: 5 day – 38-52%; 20day – 62%, 76% & 78%
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 5 hours; direct photolysis – 5 days
Mobility in soil, water	sufficiently water soluble to move readily in soil & water
Aquatic Toxicity	
LC <sub>50</sub> (Fish, 96hr)	400mg/litre (Pimephales promelas), 265 & 360mg/litre (Leuciscus idus – 48hr)
EC <sub>50</sub> (Crustacea, 48hr)	110 mg/litre (Artemia salina), 1260 & 4150mg/litre (Daphnia magna, 24hr)
EC <sub>50</sub> (Algae, 8 day)	1400mg/litre (Microcistis aeruginosa), 165mg/litre (Scenedesmus quadricauda), 110 & 250mg/litre (Pseudokirchnerella subcapitata), 5600mg/litre (Desmodesmus subspicatus)
EC <sub>10</sub> (Bacteria)	1378mg/litre (Chilomonas paramecium), 460mg/litre (Entosiphon sulcatum), 1600mg/litre (Urenoma parduzci) 190mg/litre (Pseudomonas putida), >1000mg/litre (sewage sludge)

### 13. DISPOSAL

# **Waste 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 INFORMATION

Canada TDG AND	UN / PIN # Shipping Name	UN1220 Isopropyl Acetate	
U.S.A. 49 CFR	Class & Packing Group	3 (II)	3

Marine Pollutant	Not a marine pollutant
ERAP Required (CA	No
only)	
Emergency Response	129
Guide No.	
Reportable Quantity	None
(RQ – USA only)	

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. REGULATORY INFORMATION

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

### Canada Regulations:

CEPA - National Pollutant Release Inventory (NPRI) Not specifically listed.

### U.S.A. Regulations:

Immediately Dangerous to Life or Health: 1800 ppm

**OSHA Standards: Permissible Exposure Limit:** 8-hr Time Weighted Avg: 250ppm (950mg/m3). Vacated 1989

OSHA PEL TWA 250ppm (950mg/m3); STEL 310ppm (1185mg/m3) is still enforced in some states. **NIOSH Recommendations:** After reviewing available published literature, NIOSH provided comments to OSHA on August 1, 1988, regarding the "Proposed Rule on Air Contaminants" (29 CFR 1910, Docket No. H-020). In these comments, NIOSH questioned whether the PELs proposed for isopropyl acetate (TWA 250 ppm; STEL 310 ppm) were adequate to protect workers from recognized health hazards.

**Threshold Limit Values:** 8 hr Time Weighted Avg (TWA): 100 ppm; 15 min Short Term Exposure Limit (STEL): 200 ppm.

Atmospheric Standards: This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Isopropyl acetate is produced, as an intermediate or final product, by process units covered under this subpart.

**FDA Requirements:** Isopropyl acetate is an indirect food additive for use only as a component of adhesives. Isopropyl acetate is a food additive permitted for direct addition to food for human consumption as a synthetic flavoring substance and adjuvant in accordance with the following conditions: a) they are used in the minimum quantity required to produce their intended effect, and otherwise in accordance with all the principles of good manufacturing practice, and 2) they consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in food, prior-sanctioned for such use, or regulated by an appropriate section in this part.

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** 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.

SARA 311/312 Hazards: Fire Hazard

Acute Health Hazard

## <u>US State Regulations</u> Right-To-Know Act:

	Components	CASRN
Massachusetts – listed	Isopropyl acetate	108-21-4
New Jersey – listed	Isopropyl acetate	108-21-4
Pennsylvania – listed	Isopropyl acetate	108-21-4

California Prop. 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

# International Regulations

**International Inventories** 

Listed on the chemical inventories of the following countries or qualifies for an exemption:

Australia (AICS)

China (IECSC) Japan (ENCS)

Japan (ISHL)

Korea (KECI)

New Zealand (NZIoC)

Philippines (PICCS)

# 16. OTHER INFORMATION

NFPA RATING	Health	2		Flamn	nability	3	Instability	0
Prepared for	Megaloid Laboratories			by	Rob Cangiano			
Preparation Date:	October 20	006		·				
Revision Dates:	October 2009, October 2012, November 2015, August 2018, November 2019							

Key to	ACGIH® = American Conference of Governmental Industrial Hygienists					
Abbreviations	AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data					
	Bank					
	IARC = International Agency for Research on Cancer					
	NIOSH = National Institute for Occupational Safety and Health					
	NTP = National Toxicology Program					
	OSHA = US Occupational Safety and Health Administration					
	RTECS® = Registry of Toxic Effects of Chemical Substances					
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).					
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