


Number: 014

Section 1. Product and Company Identification

Product name: n-Propyl acetate
Synonyms: -
Recommended use and Restrictions on use: enamel, resin, plastic, organic synthesis, reagent.
Manufacturer, Importer, or Supplier: Shiny Chemical Industrial Co., Ltd. Address: No.5, Yeong Gong 1 st Rd, Yeong An Dist., Kaohsiung 82841, Taiwan, R.O.C. Telephone: +886-7-8619171 ext. 711~714
Emergency telephone number: +886-7-8619171 ext. 711~714 Fax: +886-7-6222620

Section 2. Hazards Identification

Classification: 1. Flammable liquid, categories 2 2. Serious eye damage/eye irritation, categories 2A 3. Hazardous to the aquatic environment (acute toxicity), categories 3 4. Specific target organ toxicity following single exposure, categories 3
Label elements:  Hazard pictograms: Flame, Exclamation mark Signal word: Danger Hazard Statements: 1. Highly Flammable liquid and vapour. 2. Causes serious eye irritation. 3. May cause respiratory irritation. 4. May cause drowsiness or dizziness. 5. Harmful to aquatic life. Precautionary statements: 1. Avoid contact with eyes. 2. Keep away from sources of ignition - No Smoking. 3. Keep containers in a well-ventilated place.
Other Hazards: -

Section 3. Composition/Information on Ingredients

Pure substance

Chemical Name: n-Propyl acetate

Synonyms: Acetic acid n-propyl ester, Acetic acid propyl ester, 1-Acetoxypropane, 1-Propyl acetate, n-Propyl ethanoate, Acetate de propyl normal.

CAS NO. : 109-60-4

Weight: 100%

Section 4. First Aid Procedures

Description of first aid measures:

• Inhalation:

1. Administered oxygen if patient is unconscious.
2. Remove patient to fresh air, or remove the pollutant away at once.
3. If patient has stopped breathing administrate the ARTF respiratory. If patient is in cardiac arrest administrate CPR, continue life supporting measures until medical assistant arrive.
4. Get medical attention immediately.

• Skin contact: If this product contacts the skin, flush warm water for at last 5 minutes or until pollutant removing.

• Eye contact:

1. If this product contacts the eyes, lifting the lower and upper lids and flush eyes continuously with warm water for at last 5 minutes.
2. Get medical attention immediately.

• Ingestion:

1. Not allowed to feed the any food or water if patience is unconscious.
2. Do not induce vomiting.
3. Feed the patient 240 ~ 300 mL of water.
4. Provide the water for patient's month rinsing after patient vomited.
5. If patient has stopped breathing administrate the ARTF respiratory. If patient is in cardiac arrest administrate CPR, continue life supporting measures until medical assistant arrive.
6. Get medical attention immediately.

The most Important Symptoms and Hazardous Effects: Can cause headache, dyspnea and cause nervous system injury after overexposure.

Protection for emergency personnel: The first aid personnel should be wear the level C protective suit before execute the duty.

Notes to Physicians: Gastric lavage and charcoal may using for treatment after this product has been swallowed.

Section 5. Firefighting Measures

Suitable extinguishing media: Carbon dioxide, dry chemical powder or firefighting foam. Do not use water.

Special hazards during firefighting:

1. Vapors may travel considerable distance to source of ignition and flash back.
2. Toxic gas may produce during the fire.
3. Highly concentration solvent is flammable liquid.
4. The hermetically sealed container within this product might be explosion during the fire heating.

Firefighting procedures:

1. Stop the leakage if possible.
2. Let the fire burn if the leakage could not be stop.
3. It may cause explosion when the fire is gone and leakage exited.
4. Isolate the other container form the fire and protect the members.
5. Removed the container and make sure the member without risk concern.
Cooling the fire tank or fire container by water. Use the auto-swing fire monitor for huge fire.
6. Use the water spray or water mist for container leakage, and protect the leakage stopper from the danger by water spray.
7. Use the water spray or water mist to dilute the pollutant.
8. Evacuate surrounding areas. And escape from the fire area while the PSV had noise or tank turns red.
9. Evacuate area and extinguish the fire from the safety area.
10. Stay in the safety area and avoid the hot steam and poison gas.

Protective equipment for firefighters: Use government approved SCBA and full protective equipment.

Section 6. Accidental Release Measures

Personal precautions:

1. Keep unnecessary and unprotected personnel from entering.
2. Make sure that decontamination people had been trained.
3. Put on appropriate personal protective equipment.

Environmental precautions:

1. Ventilate area. Wear appropriate respirator when ventilation is inadequate.
2. Eliminate all ignition sources.
3. Inform the relevant authorities involve the council of Labor Affairs and Environmental Protection Administration.

Methods for cleaning up:

1. No action shall be taken involving any personal risk or without suitable training.
2. Do not allow material to enter sewers or ground.

3. Stop or control the spill, if this can be done without undue risk.
4. Absorb on vermiculite or similar material.
5. Spill Release (small): Absorb on vermiculite or similar material, isolate discharged material for proper disposal, then wash the contamination area by water.
6. Spill Release (large): Call the fire brigade and emergency response center for help.

Section 7. Handling and Storage

Handling:

1. The employees or stuffs should be trained before use this product.
2. Eliminate all ignition sources.
3. Use approval container with NO SMOKING symbol for store.
4. Make sure that ventilation system and electrical equipment without the spark occur in the store place.
5. Keep the exit and entry clear.
6. Use only with compatible chemicals.
7. Work in well ventilated areas.
8. Activities such as sanding, burning off etc. of paint films may generate fumes hazardous to the skin and lungs.
9. Contain in the appropriated container with clear label.
10. Do not pump put this product by pressured air.
11. Container and separated apparatus should be inspected by stuff.
12. Do not in the storage area for load separately.
13. Grounding or bonding of containers is recommended before material transfer.
14. Use local exhaust ventilation and personal skin and respiratory protective equipment as appropriate.
15. Do not put the contamination product back to the storage container.
16. Container and tank should put the nitrogen in for fire and explosion concern.
17. Put the fire detector and auto firefighting system in the process storage area.
18. Container should have label and keep tightly closed.
19. Do not allow to cut, drill or weld before the residues removing from the used container, pipe or equipment.

Storage:

1. Store in cool, dry and well-ventilated place. Store only with compatible chemicals.
2. Check the new container is appropriate.
3. Stock control.
4. Keep tightly closed.
5. Put the empty container away form the storage area.

6. Put the small stock in the fire resistant room.
7. Store the amount stock in the fireproof building.
8. Followed the regulation for store.
9. Storage area control and manager.
10. Put the storage area away from the process area, exit and entry.
11. Inspection periodically.

Section 8. Exposure controls

Engineering controls:

1. It is recommended that work be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards).
2. Isolated the workplace is recommended when local exhaust ventilation is not sufficient to control airborne contamination.

Control parameters

TWA	STEL	CEILING	BEIs
200 ppm	250 ppm	-	-

Personal protective equipment:

- Respiratory protection:
 1. The concentration below 1,700 ppm: Can use the mask with canister of organic solvent, the mask with air supplied hose, or circuit self-contained breathing apparatus.
 2. Unknown condition: Can use the mask with air supplied hose, or circuit self-contained breathing apparatus.
 3. Escaping: Can use the mask with canister of organic solvent or circuit self-contained breathing apparatus.
- Hand protection: Protection gloves by 4H.
- Eye protection: Mask and glasses for chemical resistant.
- Skin and physical protection: Protection suit and boots for chemical resistant.

Hygiene measures:

1. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
2. Appropriate techniques should be used to remove potentially contaminated clothing.
3. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
4. Keep the workplace clean.

Section 9. Physical and Chemical Properties

Appearance: Clear	Odor: pear taste
Odor threshold: 1. 0.048 ~ 0.7 ppm (detection) 2. 0.14 ~ 26 ppm (perceive)	Melting point: -92°C
pH: -	Boiling point/Boiling range: 101.6°C
Flammability (solid, gas): -	Flash point: 13 ~ 14.4°C
Decomposition temperature: -	Test method: close cup
Auto-ignition temperature: 450°C	Explosion limits: 1.7% (38°C)
Vapor pressure: 25 mmHg (25°C)	Vapor density: 3.52 (air=1)
Density: 0.887 (Water=1)	Solubility: 18.9 g/100 mL in water (20°C)
Partition coefficient (n-octanol/water, log K _{ow}): 1.24	Volatility rate: 6.1 (Ether=1)

Section 10. Stability and Reactivity

Chemical stability: The product is stable without water.
Possibility of hazardous reactions: 1. Strong oxidizing agents: Fire and explosion 2. Strong Bases and strong acid: Hydrolysis 3. Reactive nitride: Fire and explosion.
Conditions to avoid: Avoid contact with heat, open flame, sparks, or ignition sources.
Materials to avoid: Strong Bases, strong acid, strong oxidizing agents and reactive nitride.
Hazardous decomposition products: Acetic acid and n-propanol.

Section 11. Toxicological Information

Exposure Route: Inhalation, skin contact, eye contact, and ingestion.
Symptoms: 1. Excessive overexposure may cause giddiness. 2. Dizziness. 3. Headache. 4. Nausea and in extreme cases. 5. Unconsciousness and respiratory depression.
Acute toxicity: 1. The emission of 200 ppm steam may cause moderately irritating to nose, throat or breathing passages. 2. May cause unconsciousness by depressing the central nervous system after prolonged exposure to high concentrations. • LD ₅₀ (animal test, entry): -

- LC₅₀ (animal test, entry): -
- 500 mg/24 hour(s) (rabbit, skin): Cause slight irritating.
- 100 mg/24 hour(s) (rabbit, eyes): Cause slight irritating.

Chronic / Long-term toxicity: May cause dry skin by dissolving skin oils. Prolonged contact may cause burns with redness and pain.

Section 12. Ecological Information

Ecological toxicity:

1. LC₅₀ (fish): 56 ~ 60 mg/L/96 hour(s)
2. EC₅₀ (aquatic invertebrates): -
3. Bioconcentration factor (BCF): 2.4 ~ 5.1

Persistence and degradability:

1. BOD₅ is 62%.
2. Might be decomposition in the water.
3. The product's half-life among 3.39 ~ 6.69 days if it released in the air and reacted with hydrogen free radical.
 - Half-life (Air): 81.36 ~ 160.56 hours
 - Half-life (Water surface): 6.5 hours
 - Half-life (Groundwater): -
 - Half-life (Soil): -

Bioaccumulative potential: May not cause Bio-accumulative.

Mobility in soil: In to the ground water and volatile ASPS.

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal Considerations

Waste disposal:

1. Discharge, treatment or disposal is subject to national, state, or local laws.
2. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
3. The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Section 14. Transport Information

United Nations Number (UN No.): 1276

UN Proper Shipping Name: n-propyl acetate

Transport Hazard classes: 3

Packaging Group: II

Marine pollutant (Yes/No): No

Specific Transport Measures and Precautionary Conditions: -

Section 15. Regulatory Information

Applicable Regulations:

1. Occupational Safety and Health Act.
2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals.
3. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste.
4. Standards of Permissible Exposure Limits at Job Site.
5. Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations.
6. Regulations Governing Designating and Handling of Priority Management Chemicals.

Section 16. Other Information

References	<ol style="list-style-type: none"> 1. CHEMINFO database, 2016. 2. RTECS database, 2016 3. European Chemicals Agency (ECHA) 4. National Institute of Technology and Evaluation.
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Notes	The symbol " - " in this sheet indicates no available information; the symbol " / " indicates the information is not applicable to the substance.