



Material Safety Data Sheet


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Section 1 - Product and Company Identification

Product name : Propylene glycol monomethyl ether acetate	
Other names : --	
Product use : Painting, ink dissolvent, detergent, Leather dye, original pesticide	
Supplier's name : San Fu Chemical Co., Ltd., Shan Hua Plant	
Supplier's address : 340 Hsiao Hsin Li, Shan Hua Town, Tainan Hsien, Taiwan, R.O.C.	
Supplier's phone : 06-5837608	Emergency phone : 06-5837608
FAX. : 06-5839498	

Section 2 - Hazards Identification

Classification :
1. Flammable Liquids Category 3
2. Serious eye damage/ irritation Category 2
The Most Important Hazards and effect
Label element :
■ Hazard symbol : Flame, Exclamation Mark

■ Signal word : Warning
Hazard statement :
1. Flammable liquids and vapor
2. Cause eye irritation
Precautionary statement :
1. Keep container tightly closed.
2. Store in well ventilated area
3. Away from kindling- no smoking
4. Take off the contaminated cloth immediately
5. Wear goggles/ face shield
Others Hazard : --

Section 3 - Composition/Information On Ingredients

pure Substance :

Chemical name : (1-Methoxy-2-propyl) acetate , Propylene glycol monomethyl ether acetate (PGMEA)
Synonyms : (Propylene glycol monomethyl ether acetate) 1-Methoxy-2-propanol acetate 、 Propylene glycol methyl ether acetate 、 Acetic acid,2-methoxy-1-methylethyl ester 、 PGMEA 、 2-Methoxy-1-methylethyl acetate 、 1-Methoxy-2-acetoxypropane 、 2-Acetoxy-1-methoxypropane 、 Propylene glycol 1-methyl ether2-acetate 、 PMA
CAS No. : 108-65-6
Ingredient contributing to the hazard(%) : 100%



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Section 4 - First Aid Measures

The First-aid Information : <ul style="list-style-type: none">■ Inhalation : Remove the contaminated origin or move the patient to an air-circulated place. Seek medical attention immediately.■ Skin Contact : Take off the contaminated cloth and shoes during flushing. Must wash before throw away or reuse. Seek medical attention immediately.■ Eye Contact : Immediately flush the contaminated eyes with gentle water , holding lids apart to ensure flushing of the entire surface. Seek medical attention immediately.■ Ingestion : Give large amount of water to induce vomiting. Seek medical attention immediately.
The Most Important Symptoms and Hazardous Effects : --
Protection of First-aiders : <ol style="list-style-type: none">1. Personnel are not allowed to enter the disaster area to move the patient without chemical protective clothing and respirator.2. Wear proper protective equipments to practice the first aid in the safety area.
Notes to a Physician : --

Section 5 - Fire Fighting Measures

Extinguishing Media : Water CO ₂ , Chemical powder, foam
Specific Hazards when Fire-fight : <ol style="list-style-type: none">1. Density of the vapor is heavier than air.2. May produce explosive mixture while mix with air.
Specific Fire-fighting Procedure : <ol style="list-style-type: none">1. If safe to do so, move the undamaged containers from fire area.2. Cool tanks or containers with water spray, till the fire is extinguished.3. Away from the end of the storage.4. In the storage cabinet or area, use unmanned operating spray controller or self swinging fire water monitor till the fire is extinguished.5. If not working, to the following measures: Isolate the danger area, and no entry for non-related personnel.6. Allow to burn out.7. Evacuate immediately if the alarm of the Safety valve starts or changes colors due to fire.8. Storage tank, delivery track or slot car, evacuate to 800m radius far.
Specific Protection of Firefighters : Fireman must wear full chemical protective clothing and self-contained breathing apparatus (SCBA). (wear aluminum mirage protecting coat if necessary)

Section 6 - Accidental Release Measures

Personal Precautions : <ol style="list-style-type: none">1. Restrict access the area until completion of clean up.2. Wear proper personal protective equipments.3. Vapor /aerosol adhesives produced could be inhaled.
Environmental Precautions : Avoid spilled drain into the sewer
Methods for Cleaning up : <ol style="list-style-type: none">1. Restrict access the area until completion of clean up.2. Ensure clean up is conducted by trained personnel only.



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| <ol style="list-style-type: none"> 3. Keep well ventilation in the spilled area. 4. Avoid spilled drain into the sewer. |
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Section 7 - Handling and Storage

Handling :

1. Avoid produce or inhale the dust.
2. Avoid manmade contact, include inhalation.
3. In the risk of over exposure, wear protective clothing.
4. Process in the well ventilated place.
5. Avoid accumulation in the basin and cesspool.
6. Don't enter to the limited space, ensure the air is checked.
7. Avoid smoking, exposing in the naked fire or ignition.
8. Avoid producing electric static.
9. All wires and equipment need to be grounded.
10. Do not use plastic bucket
11. During operating, use anti-sparkling tools.
12. Avoid contact incompatible material.
13. No drinking, eating or smoking during operation.
14. Keep container closed if not using.
15. Avoid physical damage of the container
16. Wash hand with soap after operation is a must.
17. Working cloth should laundry separately.
18. Detect the quality of the air regularly to make sure the safety of the working environment.

Storage :

1. Supplies will provide the packaging.
2. Plastic container is only suitable with combustible liquid
3. Check the containers and see if they are clearly label and without leakage.
4. Avoid storing with oxidizer.
5. Avoid storing with zinc or Galvanized Metal.
6. Store in the original container and combustible area.
7. Avoid vapor accumulate in the cellar, hollow or basement.
8. No smoking, exposing in the naked fire or ignition.
9. Keep the container closed.
10. Away from incompatibles and store in a cool, dry, well ventilated location.
11. Avoid physical damage of the container and leak detecting regularly.

Section 8 - Exposure Controls & Personal Protection

Engineering measures :

1. Provide locally exhausted device.
2. While the explosive concentration exists, the ventilation equipment could prevent explosion.
3. Confirm the exposure limit approval

Control parameters

TWA	STEL	Ceiling	Biological standards
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Personal protective equipment :

■ Respiratory Protection :

1. If repeated overexposure, appropriate personal respiratory protective equipment is



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<p>highly recommended.</p> <ol style="list-style-type: none"> Different equipments are required when exposure in different concentration. Confirm the warning notice before using. Wear any NIOSH approved full-face piece oxygen-contained breathing apparatus and positive pressure demand. Wear any NIOSH approved full-face piece self-contained breathing apparatus and positive pressure demand. Unknown concentration or under condition of endanger to healthy and life: Wear any NIOSH approved full-face piece self-contained breathing apparatus and positive pressure demand. <ul style="list-style-type: none"> Hand Protection : Wear chemical protective gloves. Eye Protection : Wear chemical protective goggles Skin and Body Protection : Wear chemical protective cloth

<p>Hygiene measures :</p> <ol style="list-style-type: none"> Remove contaminated clothes, clean thoroughly before reuse or disposal. Must advise the danger to the laundry worker. Wash hands thoroughly after handling this substance. Maintain a clean work environment.

Section 9 - Physical & Chemical Properties

Appearance : liquid	Odor : light ester flavor
Color : Transparent	Melting Point: --
pH value : --	Boiling point/boiling range : 146°C
Flammability: --	Flash point : 42 °C
Decomposition temp : --	Test method : closed cup
Auto ignition temp : 315 °C	Explosion properties : 1.5%~7.0% (200°C)
Vapor pressure : 3.8mmHg @25°C	Vapor density : (air=1)4.6
Density : 0.966 (20°C)	Solubility : The degree to dissolve with water is 18.5%, could dissolved in organic liquid
log Kow : --	Evaporation Rate : 0.39 (Butyl acetate =1)

Section 10 - Stability & Reactivity Data

<p>Stability :</p> <ol style="list-style-type: none"> Could form explosive peroxides Avoid store in a long period or contact with air, light or use above the room temperature.
Possible hazardous reactions under specific conditions : --
<p>Conditions to avoid :</p> <ol style="list-style-type: none"> Heat, flame, spark, other sources of fire. May cause break or explosion while heating the container.
Materials to avoid: Avoid contacting with oxidizers.
Hazardous decomposition products : Carbon oxides



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Section 11 - Toxicological Information

Route of exposure : Skin, inhalation, ingestion, eyes
Symptoms : Sore throat, coughing, Shortness of breath, dyspnea, cyanosis, rapid breathing, skin and eye irritation, stomachache, vomit, kidney injury
Immediate Toxicity : <ol style="list-style-type: none">Skin :<ol style="list-style-type: none">No irritation.Absorb by the skin immediatelyInhalation :<ol style="list-style-type: none">Cause nose, throat irritation.Inhibit the nervous system in the extremely high concentration.Symptoms include, Dizziness, chest burning pain, headache, nausea, Sleepy, Loss of extremities coordination, even lost of consciousness.Eye :<ol style="list-style-type: none">Cause irritation with 100ppm and above.Cause tearing with 250ppm.Ingestion :<ol style="list-style-type: none">Low toxicitySwallowed with large amount may inhibit the nervous system. Symptoms are the same with inhalation cause.<ul style="list-style-type: none">● LD₅₀: 8532mg/kg (rat , oral)● LC₅₀: 4345 ppm/6H (rat , inhalation)
Specific effects : <ol style="list-style-type: none">Repeated Overexposure may cause upper respiratory tract irritation and liver and kidney effects.Big mouse exposed in PGMEA 3000 ppm, cause mild lost movement disorder, lethargy, CNS depression, hypothermia, increase of liver weight in male, embryonic mild toxicity.

Section 12 - Ecological Information

Ecotoxicology : <ul style="list-style-type: none">■ LC₅₀(fish) : 5000 µg/L/24 year (Petromyzon marinus)■ EC₅₀(Aquatic Invertebrates) : --■ Bioconcentration factor (BCF) : --
Persistence and degradability : -- <ul style="list-style-type: none">■ Half-Life (Air) : --■ Half-Life (Water surface) : --■ Half-Life (Groundwater) : --■ Half-Life (Soil) : --
Bioaccumulative potential : --
Mobility in soil : --
Other adverse effects : --

Section 13 - Disposal Considerations



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Methods of disposal :

1. Disposed liquid incineration is the best way.
2. Follow the local law and regulation

Section 14 - MSDS Transport Information

UN classification number : 1993

Proper D.O.T Shipping Name : --

Hazard Class : Category 3 Flammable liquid

Packing Group : --

Marine pollution : none

Specific precautionary transport measures and conditions : --

Section 15 - Regulatory Information

Regulations :

1. Regulations for Labor Safety and Health Installations
2. Regulations for Chemical Hazard Communication
3. Permissible Exposure Limits of Hazardous Substances in the Work Environment
4. Road Traffic Safety Regulations
5. Industrial Waste Storage and Disposal Regulations and Facility Standards

Section 16 - Other Information

Literature references	1. RTECS Database , TOMES CPS Disc , Vol.71 , 2007 2. ChemWatch Database , 2007-1 3. OHS MSDS Database , 2007 4. HSDB Database , TOMES CPS Disc , Vol.71 , 2007		
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