

## Safety Data Sheet

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### 1. Chemical product and company identification

Product name : PGMEA

#### Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.  
 Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan  
 Name of section : Electronic materials division technical department  
 Telephone number : +81-3-6214-1080  
 Facsimile number : +81-3-3241-1043  
 Mail address : el-info@kanto.co.jp  
 Reference No : GE00058 1.0  
 Recommended uses and restrictions : Electronic chemicals

### 2. Hazards identification

#### GHS classification

Physical hazards	Flammable liquids	Category 3
Health hazards	Serious eye damage/eye irritation	Category 2B
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)

Hazard pictograms



Signal word : Warning

Hazard statements : Flammable liquid and vapor  
 Causes eye irritation  
 May cause respiratory irritation  
 May cause drowsiness or dizziness

#### Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Keep container tightly closed.  
 Ground and bond container and receiving equipment.  
 Use explosion-proof electrical/ventilating/lighting equipment.  
 Use only non-sparking tools.  
 Take action to prevent static discharges.  
 Avoid breathing mist/vapors.  
 Wash hands, forearms and face thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.



Response	: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell. If eye irritation persists: Get medical advice/attention.
Storage	: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 3. Composition/information on ingredients

Distinction of substance or mixture	: Substance
Synonyms	: 2-Methoxy-1-methylethyl acetate, PGMEA, Propylene glycol monomethyl ether acetate

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
2-Acetoxy-1-methoxypropane	min. 99.5	CH <sub>3</sub> OCH <sub>2</sub> CH(OCOCH <sub>3</sub> )CH <sub>3</sub>	Listed	203-603-9	108-65-6

### 4. First aid measures

#### First aid measures

First-aid measures after inhalation	: Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	: Wash the affected areas under running water.
First-aid measures after eye contact	: Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
First-aid measures after ingestion	: The chemical is volatile. Do not induce vomiting because it increases the risk of aspiration into the lungs. Get medical attention immediately. If necessary, rinse mouth with water.
Personal Protection in First Aid and Measures	: Rescuers should wear proper protective equipment like rubber gloves, goggles.

### 5. Fire fighting measures

Suitable extinguishing media	: Dry chemical powder, carbon dioxide, dry sand, foam
Unsuitable extinguishing media	: Water spray
Firefighting instructions	: Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area. Fight fire from windward. Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale



fire.  
Personal protection (Emergency response) : Wear breathing apparatus.

## 6. Accidental release measures

### Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Keep away personnel except for authorized ones from spillage area by stretching ropes.

### Environmental precautions

Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

### Methods and Equipment for Containment and Cleaning up

For containment : Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.  
Prevention Measures for Secondary Accidents : Remove nearby sources of ignition and prepare extinguishing media.

## 7. Handling and storage

### Handling

Technical measures : Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Fire is strictly prohibited.  
Ventilate well at working places.  
Precautions for safe handling : Avoid formation of vapor and aerosols.  
Do not allow contact with oxidizing substances.

### Storage

Storage conditions : Store the bottle tightly closed in a cool, dark place because the substance is hygroscopic.  
Material used in packaging/containers : Glass, stainless steel.  
Do not use polyvinyl chloride resin, polystyrene.

## 8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established
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Appropriate engineering controls : Use with an enclosed system or a local exhaust ventilation.

### Protective equipment

Respiratory protection : If necessary, wear chemical cartridge respirator with an organic vapor cartage  
Hand protection : Impervious protective gloves  
Eye protection : Safety goggles  
Skin and body protection : Protective clothing, protective boots

## 9. Physical and chemical properties

Physical state : Liquid

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Color	: Colorless.
Odor	: Aromatic
pH	: No data available
Melting point	: -66 ° C
Freezing point	: No data available
Boiling point	: 146 ° C
Flash point	: 42 ° C (C. C.)
Auto-ignition temperature	: 354 ° C
Decomposition temperature	: No data available
Flammability	: Flammable
Vapor pressure	: 0.5 kPa (20°C)
Relative density	: No data available
Density	: 0.968 g/cm <sup>3</sup> (20°C)
Relative gas density	: 4.6
Solubility	: Water: 19.8 g/100ml (20°C)
Partition coefficient n-octanol/water (log Pow)	: 0.56
Explosive limits (vol %)	: 1.5 - 7.0 vol % (200°C) (in air)
Viscosity, kinematic:	: 1.23 mm <sup>2</sup> /s (20°C)
Particle characteristics	: No data available

## 10. Stability and reactivity

Reactivity	: May react with oxidizing substances.
Chemical stability	: Stable under normal conditions. Hydroscopic.
Possibility of hazardous reactions	: Stable under normal conditions of use.
Conditions to avoid	: Light, heat, moisture.
Incompatible materials	: Oxidizing substances.
Hazardous decomposition products	: Carbon monoxide.

## 11. Toxicological information

Acute toxicity (oral)	: No classification rat LD50>10000 mg/kg
Acute toxicity (dermal)	: No classification rabbit LD50>5000 mg/kg
Acute toxicity (inhalation)	: No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	: No classification No detailed information is available other than descriptions that the substance was not irritating based on the primary skin irritation index of 0.0 obtained from rabbit tests, and that the substance caused slight irritation or cutaneous irritation. Based on JIS classification criteria, the substance was classified into "No classification".



Serious eye damage/irritation	:	Causes eye irritation In a test involving 9 rabbits, conjunctival redness, chemosis, iritis and corneal opacity were observed following application of the substance. Mean scores were 0.8, 0.5, 0.1 and 0.2, respectively. All signs of irritation disappeared after 4 days. The effects were judged to be "slightly irritating". The substance was conclusively estimated to be slightly to moderately irritating. Based on these data, the substance was classified into category 2B.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	No classification Several tests using guinea pigs (Magnusson-Kligman maximization tests and the method of Maguire) concluded that the substance did not produce sensitization. Based on these results, the substance was classified into "No classification".
Germ cell mutagenicity	:	Classification not possible Although in vitro mutagenicity tests (Ames tests and chromosomal aberration tests) yielded negative results (Toxicity Testing Reports of Environmental Chemicals (Chemicals Investigation Promoting Council), there were no in vivo test data available. Thus, classification is not possible.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	No classification In combined repeated oral dose toxicity study with the reproduction/developmental toxicity tests using rats, body weight gain was significantly suppressed in parents of both sexes, but no significant differences from control were observed in indices that measure reproductive functions of parents, fertility, and development of the offspring. In addition, in oral administration tests using pregnant rats during the organogenetic period, no effects were observed on development of the offspring including teratogenicity. As results suggested no adverse effects on reproductive functions, fertility, and development of the offspring including teratogenicity, the substance was classified into "No classification".
STOT-single exposure	:	May cause drowsiness or dizziness May cause respiratory irritation In an oral test in rats, observations included lethargy at all doses (500 - 10000 mg/kg). In a dermal test in rabbits, narcotic effects were also found as the main symptoms. In a 2-week inhalation test with mice, an acute change, degeneration of olfactory epithelium in the nasal cavities, occurred at dose levels of 16.2 mg/L and higher concentrations and the effect was more severe and more extensive in a dose-related manner. An inflammatory exudate was found in the lumen of the nasal cavities in some animals. Based on these data, the substance was classified into category 3 (narcosis, respiratory tract irritation).
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	Classification not possible

## 12. Ecological information

### Ecotoxicity

Aquatic acute	:	No classification Oryzias LC50 > 100 mg/L/96h
Aquatic chronic	:	No classification

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**Persistence and degradability**

No additional information available

**Bioaccumulative potential**

Low bioconcentration

log Pow : 0.56

**Mobility in soil**

High mobility

Koc : 2.3

**Hazardous to the ozone layer**

Ozone : Classification not possible

**13. Disposal considerations**

Ecological waste information : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

**14. Transport information****International Regulations****Transport by sea (IMDG)**UN-No. (IMDG) : 1993  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N. O. S.  
Packing group (IMDG) : III  
Transport hazard class(es) (IMDG) : 3**Air transport (IATA)**UN-No. (IATA) : 1993  
Proper Shipping Name (IATA) : Flammable liquid, n. o. s.  
Packing group (IATA) : III  
Transport hazard class(es) (IATA) : 3

Marine pollutant : Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**Pollutant category : Z  
MFAG-No : 128**15. Regulatory information**

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

**16. Other information**Data sources : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.  
Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985) .  
Handbook of 17524 Chemical Products, The Chemical Daily Co. (2024) .

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253.

