1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Propylene glycol monomethyl ether acetate
Product Number: 484431
Brand: Sigma-Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Combustible Liquid, Target Organ Effect

Target Organs
Liver, Kidney

GHS Classification
Flammable liquids (Category 3)
Reproductive toxicity (Category 1B)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)
H226 Flammable liquid and vapour.
H360 May damage fertility or the unborn child.
H402 Harmful to aquatic life.

Precautionary statement(s)
P201 Obtain special instructions before use.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

HMIS Classification
Health hazard: 0
Chronic Health Hazard: *
Flammability: 2
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 2  
Reactivity Hazard: 0

Potential Health Effects

- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.
- **Ingestion**: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**: DOWANOL® PMA MPA  
1-Methoxy-2-propyl acetate  
1,2-Propanediol monomethyl ether acetate  
Propylene glycol methyl ether acetate  
PGMEA

**Formula**: C₆H₁₂O₃  
Molecular Weight: 132.16 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methoxy-1-methylethyl acetate</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>108-65-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>203-603-9</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-195-00-7</td>
</tr>
</tbody>
</table>
**Personal precautions**
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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7. **HANLDING AND STORAGE**

**Precautions for safe handling**
Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methoxy-1-methylethylacetate</td>
<td>108-65-6</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA, Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

- **Full contact**
  - Material: butyl-rubber
  - Minimum layer thickness: 0.3 mm
  - Break through time: > 480 min
  - Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

- **Splash contact**
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.4 mm
  - Break through time: 79 min
  - Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

**data source:** KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
**Eye protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: clear, liquid
- Colour: colourless

**Safety data**
- pH: no data available
- Melting point/freezing point: Melting point/range: < -87 °C (< -125 °F)
- Boiling point: 145 - 146 °C (293 - 295 °F) - lit.
- Flash point: 43 °C (109 °F) - closed cup - DIN 51755 Part 1
- Ignition temperature: 315 °C (599 °F) - Auto-flammability
- Auto-ignition temperature: no data available
- Lower explosion limit: 1.3 % (V)
- Upper explosion limit: 13.1 % (V)
- Vapour pressure: 3.37 hPa (2.53 mmHg) at 20 °C (68 °F)
- Density: 0.97 g/cm³ at 25 °C (77 °F)
- Water solubility: 19.8 g/l at 25 °C (77 °F)
- Partition coefficient: n-octanol/water: log Pow: 0.43
- Relative vapour density: no data available
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

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

**Materials to avoid**
Strong oxidizing agents
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

**Oral LD50**
LD50 Oral - rat - 8,532 mg/kg

**Inhalation LC50**
no data available

**Dermal LD50**
LD50 Dermal - rabbit - > 5,000 mg/kg

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
Skin - rabbit - No skin irritation

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitisation**
Maximisation Test - guinea pig - Did not cause sensitisation on laboratory animals.

**Germ cell mutagenicity**
no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
no data available

**Teratogenicity**
no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: May be harmful if swallowed.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Synergistic effects
no data available

Additional Information
RTECS: AI8925000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish mortality LC50 - Salmo gairdneri - 100 - 180 mg/l - 96 h
Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h
Method: Tested according to Annex V of Directive 67/548/EEC.

Persistence and degradability
Biodegradability Biotic/Aerobic Result: 100 % - Readily biodegradable.

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
Biochemical Oxygen Demand (BOD) 0.36 mg/l
Chemical Oxygen Demand (COD) 1.74 mg/g

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3271 Class: 3 Packing group: III
Proper shipping name: Ethers, n.o.s.
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3271 Class: 3 Packing group: III EMS-No: F-E, S-D
Proper shipping name: ETHERS, N.O.S. (2-Methoxy-1-methylethyl acetate)
Marine pollutant: No

IATA
UN number: 3271 Class: 3 Packing group: III
Proper shipping name: Ethers, n.o.s. (2-Methoxy-1-methylethyl acetate)
15. REGULATORY INFORMATION

OSHA Hazards
Combustible Liquid, Target Organ Effect

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

SARA 313 Components
SARA 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.

SARA 311/312 Hazards
Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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

16. OTHER INFORMATION

Further information
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