

SAFETY DATA SHEET

Version 4.13
 Revision Date 12/10/2014
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: Propylene glycol monomethyl ether acetate		
Product Number	: 484431		
Brand	: Sigma-Aldrich		
Product Use	: For laboratory research purposes.		
Supplier	: Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer	: Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	: +1 9058299500		
Fax	: +1 9058299292		
Emergency Phone # (For both supplier and manufacturer)	: 1-800-424-9300		
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956		

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Liver, Kidney

WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D2A	Very Toxic Material Causing Other Toxic Effects	Teratogen

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

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

CAS-No.	EC-No.	Index-No.	Concentration
2-Methoxy-1-methylethyl acetate			
108-65-6	203-603-9	607-195-00-7	<=100%
2-Methoxypropanol			
1589-47-5	216-455-5	603-106-00-0	< 0.3 %
2-Methoxy-1-methylethyl acetate			
108-65-6	203-603-9	607-195-00-7	<=100%
2-Methoxypropanol			
1589-47-5	216-455-5	603-106-00-0	< 0.3 %

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

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).

7. HANDLING 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
2-Methoxy-1-methylethyl acetate	108-65-6	TWA	50.000000 ppm	Canada. British Columbia OEL
		STEL	75.000000 ppm	Canada. British Columbia OEL
		TWAEV	50.000000 ppm 270.000000 mg/m3	Canada. Ontario OELs
2-Methoxy-1-methylethyl acetate	108-65-6	TWA	50.000000 ppm 270.000000 mg/m3	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
		STEL	75.000000 ppm	Canada. British Columbia OEL
		TWAEV	50.000000 ppm 270.000000 mg/m3	Canada. Ontario OELs
2-Methoxypropanol	1589-47-5	TWA	20.000000 ppm	Canada. British Columbia OEL
		STEL	40.000000 ppm	Canada. British Columbia OEL

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.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form clear, liquid

Colour colourless

Safety data

pH No data available

Melting point/freezing point Melting point/range: < -86.99 °C (< -124.58 °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/cm ³ 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 (GPMT) - 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.

Reproductive toxicity

No data available

No data available

Teratogenicity

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 - <i>Salmo gairdneri</i> - 100 - 180 mg/l - 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - <i>Daphnia magna</i> (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.
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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

WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D2A	Very Toxic Material Causing Other Toxic Effects	Teratogen

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Further information

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