

Safety Data Sheet



CJ CHEMICALS
SETTING THE INDUSTRY STANDARD FOR CUSTOMER SERVICE

SECTION 1: Identification of the substance/mixture and the company/undertaking

1.1 Production identifiers

Product name : GLYCOL ETHER DPM ACETATE
Brand : CJ Chemicals LLC
CAS-No. : 88917-22-0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : CJ Chemicals LLC
3469 E Grand River Rd #112
Howell, MI 48843
United States

Telephone : +1 (888) 274-1044

1.4 Emergency Telephone

Emergency Phone # : 1-800-424-9300 CHEMTREC (USA)
1-703-527-3887 CHEMTREC (international) 24 hours/day; 7 days/week

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Sweet ethereal odour.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
Flammable liquid - Category 4

Label elements

Signal Word

WARNING!

Hazard statement(s)

Combustible liquid.

Precautionary statement(s)

Keep away from flames and hot surfaces. - No smoking.
Wear protective gloves and eye/face protection.
In case of fire: Use water fog, dry chemical, CO₂ or 'alcohol' foam to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification: Burning produces obnoxious and toxic fumes. May be mildly irritating to eyes and skin. Ingestion of large amounts may cause: Dizziness, headache, and nausea. Fumes from heated product or mists may irritate respiratory tract.

Ecological information:
See Section 12 for more environmental information. Avoid release to the environment.

SAFETY DATA SHEET

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Dipropylene glycol methyl ether acetate	DPMA	88917-22-0	100.00

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Get medical advice/attention if you feel unwell.
- Inhalation* : If breathed in, move person into fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical advice/attention if you feel unwell.
- Skin contact* : Wash affected areas with soap and water. Remove and wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.
- Eye contact* : Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. If eye irritation persists: get medical advice/attention.

Most important symptoms and effects, both acute and delayed

- : May cause mild skin and eye irritation. Exposure may cause temporary irritation, redness or discomfort.
Ingestion of large amounts may be harmful. Ingestion of large amounts may cause: Dizziness, headache, and nausea. Fumes from heated product or mists may irritate respiratory tract. Symptoms may include coughing and sneezing.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO₂); Dry chemical; Alcohol resistant foam; Water fog
- Unsuitable extinguishing media* : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Combustible liquid and vapor. Keep away from flames and hot surfaces. Burning produces obnoxious and toxic fumes. Vapors are heavier than air and may spread along floors. Material will float on water and can be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. After prolonged storage, may release explosive peroxides in the presence of air. Rate of peroxide formation is not known.

Flammability classification (OSHA 29 CFR 1910.106)

- : Flammable liquid - Category 4

Hazardous combustion products

- : Carbon oxides and other irritating fumes and smoke.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

SAFETY DATA SHEET

- : Avoid breathing fumes, mists or vapors. Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Remove all sources of ignition. All persons dealing with the clean-up should wear the appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.

- Environmental precautions** : Do not allow material to contaminate ground water system. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

- : In case of transportation accident, contact TERRAPURE ENVIRONMENTAL at 1-800-567-7455. EPA/CERCLA Reportable quantity (RQ): None known.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use in a well-ventilated area. Keep away from flames and hot surfaces. - No smoking. Wear appropriate protective equipment. Wear protective gloves and eye/face protection. Bond and ground transfer containers and equipment to avoid static accumulation. Avoid breathing fumes, mists or vapors. Avoid generating vapours or mists. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. Wash with soap and water after handling. Keep away from incompatibles. Keep containers closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

- Conditions for safe storage** : Store in a well ventilated place. Keep cool. Keep away from heat and sources of ignition. Keep container tightly closed. Store away from incompatible materials. Do not store in direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

- Incompatible materials** : Strong oxidizing agents, Strong acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:				
Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Dipropylene glycol methyl ether acetate	N/Av	N/Av	N/Av	N/Av

Exposure controls

SAFETY DATA SHEET

Ventilation and engineering measures

: Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

: If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. In misty conditions, wear NIOSH/MSHA approved mist respirator. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection

: Wear protective gloves. Advice should be sought from glove suppliers.

Eye / face protection

: Wear safety glasses with side shields (or goggles).

Other protective equipment

: Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after using this product, and before eating, drinking or smoking. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear, colourless liquid

Odour : Sweet ethereal odour.

Odour threshold : N/Av

pH : N/Av

Melting/Freezing point : >-50°C

Initial boiling point and boiling range

: 200°C

Flash point : 85°C

Flashpoint (Method) : closed cup

Evaporation rate (BuAe = 1) : Not available.

Flammability (solid, gas) : Not applicable.

Lower flammable limit (% by vol.)

: 1.21% @ 150°C

Upper flammable limit (% by vol.)

: 5.35% @ 150°C

Oxidizing properties : None known.

Explosive properties : Not explosive

Vapour pressure : 0.4 mm Hg

Vapour density : Not available.

Relative density / Specific gravity

: 0.976

Solubility in water : Soluble

Other solubility(ies) : Not available.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: 0.61

Auto-ignition temperature : 321°C

Decomposition temperature : N/Av

Viscosity : 2.243mm²/s

Volatiles (% by weight) : N/Av

SAFETY DATA SHEET

Volatile organic Compounds (VOC's)

: N/Av

Absolute pressure of container

: N/Av

Flame projection length

: N/Av

Other physical/chemical comments

: Molecular Weight: 190.24g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: No dangerous reaction known under conditions of normal use.

Conditions to avoid

: Keep away from flames and hot surfaces. Keep away from direct sunlight. Avoid prolonged exposure to air. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

Incompatible materials

: See Section 7 (Handling and Storage) for further details.

Hazardous decomposition products

: See Section 5 (Fire Fighting Measures).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Fumes from heated product or mists may irritate respiratory tract. Symptoms may include coughing and sneezing.

Sign and symptoms ingestion

: Ingestion of large amounts may be harmful. Ingestion of large amounts may cause: Dizziness, headache, and nausea.

Sign and symptoms skin

: May cause mild skin irritation. Exposure may cause temporary irritation, redness or discomfort.

Sign and symptoms eyes

: May cause mild eye irritation. Exposure may cause temporary irritation, redness or discomfort.

Potential Chronic Health Effects

: None reported by the manufacturer.

Mutagenicity

: Not expected to be mutagenic in humans.

Carcinogenicity

: No components present at greater than 0.1% are considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material

: Not expected to be a skin or respiratory sensitizer.

SAFETY DATA SHEET

Specific target organ effects : Not classified as a specific target organ toxicity-single exposure.
Not classified as specific target organ toxicity-repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: No information available.

Toxicological data

: See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Dipropylene glycol methyl ether acetate	> 5.7 mg/L	2928 - 9760 mg/kg	> 5000 mg/kg

Other important toxicological hazards

: None reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for the substance's ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Dipropylene glycol methyl ether acetate	88917-22-0	151 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Dipropylene glycol methyl ether acetate	88917-22-0	1090 mg/L (Daphnia magna)	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Dipropylene glycol methyl ether acetate	88917-22-0	11.37 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability

: Expected to be readily biodegradable.

Bioaccumulation potential

: See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Dipropylene glycol methyl ether acetate (CAS 88917-22-0)	0.61	3.16





SAFETY DATA SHEET

- Mobility in soil** : There is no data available for this product.
- Other Adverse Environmental effects** : No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Refer to protective measures listed in sections 7 and 8.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	NA1993	Combustible liquid, n.o.s. (Dipropylene glycol methyl ether acetate)	Combustible.	III	
49CFR/DOT Additional information	Not regulated for road or rail shipment if packaged in non-bulk containers (450 Litres or less each). Refer to 49 CFR Section 173.150.				
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				

- Special precautions for user** : Keep away from extreme heat and flame. Appropriate advice on safety must accompany the package.
- Environmental hazards** : This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

SAFETY DATA SHEET

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Dipropylene glycol methyl ether acetate	88917-22-0	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Flammable. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Dipropylene glycol methyl ether acetate	88917-22-0	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Dipropylene glycol methyl ether acetate	88917-22-0	N/Av	Present	Present	(2)-3928	KE-12228	Present	N/Av

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
 AICS: Australian Inventory of Chemical Substances
 CA: California
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980

SAFETY DATA SHEET

CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EC50: Effective Concentration 50%
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organisation
IECSC: Inventory of Existing Chemical Substances
Inh: Inhalation
IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet / Material Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016
 2. International Agency for Research on Cancer Monographs, searched 2017
 3. Canadian Centre for Occupational Health and Safety, CCHInfoWeb databases, 2017(Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.
 5. US EPA Title III List of Lists - 2017 version.
 6. California Proposition 65 List - 2017 version.
 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal,2017.

Preparation Date (mm/dd/yyyy)

: 07/10/2017

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

SAFETY DATA SHEET

<p><u>Prepared for:</u> Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON L9S 3W4 Information (M-F 8:00-5:00): 705-436-5580 www.cometchemical.com</p>	 <p>COMET COMET CHEMICAL COMPANY LTD.</p>
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	 <p>icc ComplianceCenter</p>

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Comet Chemical Company Ltd. and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Comet Chemical Company Ltd. expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Comet Chemical Company Ltd.

END OF DOCUMENT