

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

Identity (As Used on Label and List)

MAPP GAS

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Supplier's Name

Global Refrigerants (S) Pte Ltd

Emergency Telephone Number

+65-68633983

Address

Number, Street, City, State and ZIP Code

9 Tuas Link 1, Singapore 638587

Telephone Number for Information

+65-68633983

Date Prepared

August 10, 2008

Signature of Preparer (Optional)

SECTION II - Hazardous Ingredients / Identity Information

Hazardous Components

Specific Chemical Identity, Common Name(s)

Propane CAS NO. 74-98-6

Propene CAS NO. 115-07-1

Dimethyl Ether CAS NO. 115-10-6

OSHA PEL

N/A

N/A

N/A

ACGIH TLV

N/A

Other Limits
Recommended

N/A

% (optional)

N/A

N/A

N/A

NFPA HAZARD RATINGS

Health -2

Flammability -4

Reactivity -2

HMIS RATINGS

Health -0

Flammability -4

Reactivity -2

Notes

SECTION III - Physical / Chemical Characteristics

Boiling Point

-54° F to -10° F

Specific Gravity (H₂O - 1)

0.571

Vapor Pressure (mm Hg)

@ 70° F

97 psig

Melting Point

N/A

Vapor Density (AIR=1)

1.48

Evaporation Rate

Butyl Acetate -1)

N/A

Solubility in Water

Slight

Appearance and Odor

Colorless - unpleasant odor at approx. 100ppm

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used)

Closed Cup -156° F

Flammable Limits

In air by volume

LEL

3.0

UEL

11.0

Extinguishing Media

**Eliminate oxygen source or stop flow of gas. Use water to cool cylinder.
Dry chemical or CO₂ to reduce oxygen.**

Special Fire Fighting Procedures

Cool cylinders with water. Keep personnel away.

Unusual Fire and Explosion Hazards **Auto Ignition temp. 850° F. Keep ignition sources away from cylinder and continue to cool cylinder until gas flow is shut off. Escaping gas from cylinder may be ignited.**

SECTION V - Reactivity Data

Stability →

Unstable

Stable X

Conditions to Avoid

Do not expose to temperatures above 125° F.

Incompatibility (Materials to Avoid)

Extremely flammable. Avoid uncontrolled contact with oxidizers.

Hazardous Decomposition or Byproducts

None

Hazardous
Polymerization →

**May Occur
Will Not Occur X**

Conditions to Avoid

N/A

SECTION VI - Health Hazard Data

Routes of Entry →	Inhalation? YES	Skin? YES	Ingestion? UNLIKELY
-------------------	---------------------------	---------------------	-------------------------------

Health Hazards (Acute and Chronic)

Asphyxiant. May reduce oxygen required for breathing. Liquid gas may freeze skin.

Carcinogenicity →	NTP? N/A	IARC Monographs? N/A	OSHA Regulated? NO
-------------------	--------------------	--------------------------------	------------------------------

Signs and Symptoms of Exposure

Dizziness to unconsciousness if high concentrations of gas replace oxygen for breathing.

Medical Conditions Generally Aggravated by Exposure

N/A

Emergency and First Aid Procedures

Remove person to fresh air.. If unconscious, seek medical attention.

Warning

This fuel, and byproducts of combustion of this fuel, contain chemicals known to the State of California to cause cancer, birth defects, and other reproductive harm.**SECTION VII - Precautions for Safe Handling and Use**

Steps to be Taken in Case Material is Released or Spilled

Remove ignition sources. Ventilate area.

Waste Disposal Method

Vent to atmosphere in outdoor area free of all sources of ignition.

Precautions to be Taken in Handling and Storing

**Store in well ventilated area away from all ignition sources.
Store at temperatures below 125° F. Store out of direct sunlight.**

Other Precautions

N/A**SECTION VIII - Control Measures**

Respiratory Protection (Specify Type)

Not required with normal use.

Ventilation →	Local Exhaust Advisable when welding.	Mechanical (General) N/A	Special N/A	Other N/A
---------------	---	------------------------------------	-----------------------	---------------------

Protective Gloves Advisable when welding.	Eye Protection Use filter shade No. 4 or darker when welding.
---	---

Other Protective Clothing or Equipment

N/A

Work / Hygienic Practices

N/A**SECTION IX - Shipping Information**

WHMIS Classification: A - Compressed Gas & B1-Flammable Gas		Class: 2.1	
DOT	Proper Shipping Name Propane, Propene and dimethyl ether Mixture	Hazard Classification Flammable Gas	UN. No. 1060