

# MATERIAL SAFETY DATA SHEET



Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

## Section 1: Identification

<b>1.1 Product identifier</b>	
Product name	Map+
Chemical name	PROPLENE/PROPANE AND DIMETHYL ETHER
Product code	No
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	
Identified Use(s)	For use with Professional type brazing and soldering torches.
Uses Advised Against	None known.
<b>1.3 Details of the supplier of the safety data sheet</b>	
Manufacturer	PUMP HOUSE. Glaisdale Drive East Nottingham NG8 4LY
Telephone	+44(0)115 900 5858
Fax	+44(0)115 929 4468
E-Mail (competent person)	sales@pumph.co.uk
<b>1.4 Emergency telephone number</b>	
Emergency Phone No.	+44(0)115 900 5858 (8am – 5pm)
Languages spoken	English

## Section 2: Hazard Identification

<b>2.1 Classification of the substance or mixture</b>	
<b>2.1.1 Regulation (EC) No. 1272/2008 (CLP)</b>	Flam. Gas 1; H220 Liquefied gas; H280
<b>2.1.2 Directive 67/548/EEC &amp; Directive 1999/45/EC</b>	F+; R12: Extremely flammable.
<b>2.2 Label elements</b>	
Product Name	According to Regulation (EC) No. 1272/2008 (CLP)
Contains:	Map+
	No substances to declare on the label.
Symbols:	 
Signal Words:	Danger
Hazard Statements:	H220: Extremely flammable gas. H280: Contains gas under pressure; may explode if heated.
Precautionary Statement(s)	P102: Keep out of reach of children. P210: Keep away from heat /sparks/open flames/hot surfaces and other ignition sources. No smoking. P251: Do not pierce or burn, even after use. P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381: Eliminate all ignition sources if safe to do so. P410+P403: Protect from sunlight. Store in a well-ventilated place. P412: Do not expose to temperatures exceeding 50°C/ 122°F.

# MATERIAL SAFETY DATA SHEET

Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

## Section 3: Composition/Information on Ingredients

3.1 Substances Not applicable - Substances in preparations / mixtures

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Hazardous ingredient(s)	Weight %	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Propylene	30%	115-07-1	204-062-1	Not yet assigned in the supply chain	Flam. Gas 1; H220
Dimethyl ether	40%	115-10-6	204-065-8	Not yet assigned in the supply chain	Flam. Gas 1; H220 Liquefied gas; H280
Propane	30%	74-98-6	200-827-9	Not yet assigned in the supply chain	Flam. Gas 1; H220 Liquefied gas; H280

Directive 67/548/EEC & Directive 1999/45/EC

Hazardous ingredient(s)	Weight%	CAS No.	EC No.	REACH Registration No.	EC Classification and Risk Phrases
Propylene	30%	115-07-1	204-062-1	Not yet assigned in the supply chain	F+; R12: Extremely flammable.
Dimethyl ether	40%	115-10-6	204-065-8	Not yet assigned in the supply chain	F+; R12: Extremely flammable.
Propane	30%	74-98-6	200-827-9	Not yet assigned in the supply chain	F+; R12: Extremely flammable.

## Section 4: First-aid Measures



### 4.1 Description of first aid measures

Self-protection of the first aide

Inhalation

Skin Contact

Eye Contact

Ingestion

Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. Take care to self-protect by avoiding becoming contaminated – use approved positive pressure air supplied breathing apparatus with a full facepiece. Move contaminated patient(s) out of the dangerous area.

If breathed in, move person into fresh air. Keep breathing smooth. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Consult a physician.

This product is liquefied gas. Contacting lots of liquefied propane may send skin frostbite. If the skin feels uncomfortable, seek immediate medical assistance.

This products is liquefied gas, it may damage the eyes. Remove any contact lenses. Flush eyes with water thoroughly and continuously for at least 15 minutes. Keep eye wide open while rinsing. If there are signs of frostbite, pain, swelling, lachrimation or photophobia persists, the patient should be seen in a specialist health care facility.

Ingestion is not considered a likely route of exposure – frostbite to the lips and mouth may occur if in contact with the liquid. If swallowed, seek immediate medical assistance.

Frostbite (cold burn).

### 4.2 Most important symptoms and effects, both acute and delayed

### 4.3 Indication of any immediate medical attention and special treatment needed

A simple asphyxiant gas at normal temperatures and pressures – there is no specific antidote. In the event of contact with product in liquid form treat for frostbite.

# MATERIAL SAFETY DATA SHEET

Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

## Section 5: Fire-fighting Measures

- 5.1 Extinguishing media** Carbon monoxide,carbon dioxide; Water spray,foam,dry powder,carbon dioxide;Use water mist spray mass burning fire.
- 5.2 Special hazards arising from the substance or mixture** Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide and unburned hydrocarbons (smoke). The vapour is heavier than air and spreads along ground. Danger of flashback.
- 5.3 Protective Equipments for Fire Fighting** Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Containers may explode when involved in a fire. Keep containers cool by spraying with water if exposed to fire. Prevent liquid entering sewers, basements and workpits; vapour may create explosive and toxic atmosphere.

## Section 6: Accidental Release Measures

- 6.1 Personnel protection** Eliminate sources of ignition. May form explosive mixture with air particularly in enclosed spaces. Avoid contact with skin and eyes. Ensure adequate ventilation.Ensure suitable personal protection during removal of spillages. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems.
- 6.2 Environmental preventive measures** Do not allow to enter drains, sewers or watercourses. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.
- 6.3 Cleaning method** Shut off leaks if without risk. Allow to evaporate. Ensure adequate ventilation.
- 6.4 Reference to other sections** See Section: 8, 13

## Section 7: Handling and Storage

- 7.1 Storage & Handling Procedures** Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Ensure adequate ventilation. Consider technical advances and process upgrades (including automation) for the elimination of releases. minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible, prior to maintenance Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenario; clear up spills immediately and dispose of waste safely. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance. When using do not smoke, eat or drink.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Do not pressurise, cut, weld, braze, solder, drill, or grind on containers. Keep only in the original container.  
Storage temperature <50°C.  
Storage life Stable under normal conditions.  
Incompatible materials Oxidising agents, chlorine and hydrogen chloride or hydrogen fluoride.
- 7.3 Specific end use(s)** See Section: 2

## Section 8: Exposure Controls/Personal Protection

- 8.1 Control parameters**
- 8.1.1 Occupational Exposure Limits** No specific WEL. Using the control banding approach, the Liquefied petroleum gas (LPG) WEL should be applied for Propene and Propane.




SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Liquefied petroleum gas	68476-85-7	1000	1750	1250	2180	WEL
Dimethyl ether	115-10-6	400	766	500	958	WEL

# MATERIAL SAFETY DATA SHEET

Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

Source: Workplace Exposure Limit (UK HSE EH40). Note Paragraphs 57 – 59 in relation to Asphyxiant gasses.

<b>8.1.2</b>	<b>Biological limit value</b>	Not established.
<b>8.1.3</b>	<b>PNECs and DNELs</b>	Not established.
<b>8.2</b>	<b>Exposure controls</b>	
<b>8.2.1</b>	<b>Appropriate engineering controls</b>	Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit. This can be achieved by local exhaust or general exhaust air collection.
<b>8.2.2</b>	<b>Individual protection measures, such as personal protective equipment (PPE)</b>	Assumes a good basic standard of occupational hygiene is implemented. Avoid contact with skin and eyes.
	Eye/ face protection	Wear eye protection with side protection (EN166).
		
	Skin protection	Wear appropriate personal protective equipment, avoid direct contact. Hand protection: Heat: Wear insulating gloves EN407 (heat). Liquid: Wear cold insulating gloves/face shield/eye protection.
		
	Respiratory protection	Respiratory protection is not necessary if room is well ventilated. In case of inadequate ventilation wear respiratory protection.
		
	Thermal hazards	Heat: Wear insulating gloves EN407 (heat). Liquid: Wear cold insulating gloves/face shield/eye protection.
<b>8.2.3</b>	<b>Environmental Exposure Controls</b>	Not applicable. The substance is a vapour at normal temperature and pressure. In normal use it is not discharged into the atmosphere but used as a fuel. □

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties (Substances in preparations / mixtures)

Physical Properties:	Liquefied Gas
Colour:	Colourless
Odour:	Odourless(pure)
Molecular Weight:	N/A
pH:	N/A
Boiling Point:	-48°C (Propene)
Melting/Freezing Point:	-185°C (Propene)
Flashy point::	-108 Highly flammable mixture.
Burning point:	No data
Combustion heat:	No data
Volatility:	Gas(under normal temperature and pressure)

# MATERIAL SAFETY DATA SHEET

Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

Solubility in water	Slightly soluble in water
Relative Density:	No data
Explosion limit(v/v):	PROPLENE Lower explosion limit 2.0%(V/V) ; Upper explosion limit 11.7%(V/V) PROPANE Lower explosion limit 2.1%(V/V):Upper explosive limit:9.5%(V/V) DIMETHYL ETHER Lower explosion limit 3%(V/V):Upper explosive limit:17%(V/V)
Vapour pressure:	No data
Relative vapour density:	1.5 at @ 15°C (Air = 1.0)
Critical temperature:	No data
Critical pressure:	No data

## Section 10: Stability and Reactivity

<b>10.1 Stability and reactivity</b>	Highly flammable.
<b>10.2 Chemical stability</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	Vapour is explosive in air at temperatures higher than the flash point. The vapour is heavier than air and spreads along ground. Danger of flashback.
<b>10.4 Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>10.5 Incompatible materials</b>	Oxidising agents, chlorine and hydrogen chloride or hydrogen fluoride.
<b>10.6 Hazardous decomposition product(s)</b>	Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide and unburned hydrocarbons (smoke).

## Section 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity</b>	
Ingestion	Based upon the available data, the classification criteria are not met.
Inhalation	High atmospheric concentrations may lead to adverse effects on the central nervous system and anaesthetic effects, including drowsiness, giddiness, headache, nausea and unconsciousness. The gas has narcotic effect and causes giddiness.
Skin Contact	Based upon the available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Contact with liquid will cause cold burns and frostbite.
<b>Serious eye damage/irritation</b>	Contact with liquid will result in serious damage.
<b>Respiratory or skin sensitization</b>	Based upon the available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	There is no evidence of mutagenic potential.
<b>Carcinogenicity</b>	No evidence of carcinogenicity.
<b>Reproductive toxicity</b>	No evidence of reproductive effects.
<b>STOT - single exposure</b>	Based upon the available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based upon the available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based upon the available data, the classification criteria are not met.
<b>11.2 Other information</b>	None.

## Section 12: Ecological Information

<b>12.1 Toxicity</b>	Not applicable as there is no release to wastewater.
<b>12.2 Persistence and degradability</b>	No data for the mixture as a whole.
<b>12.3 Bioaccumulative potential</b>	No data for the mixture as a whole.
<b>12.4 Mobility in soil</b>	Highly volatile. The product is predicted to have high mobility in soil.
<b>12.5 Results of PBT and vPvB assessment</b>	Not classified as PBT or vPvB.
<b>12.6 Other adverse effects</b>	None known.

# MATERIAL SAFETY DATA SHEET

Version: 1.1 Date: 31.07.2019

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

## Section 13: Disposal Consideration

- 13.1 Waste treatment methods** Disposal should be in accordance with local, state or national legislation. Prevent substance entering sewers. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Dispose of this material and its container as hazardous waste (2008/98/EEC).

## Section 14: Transport Information

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA/ICAO</b>
<b>14.1 UN number</b>	UN 3161	UN 3161	UN 3161
<b>14.2 Proper Shipping Name</b>	LIQUEFIED GAS, FLAMMABLE, N.O.S. (Propene, Dimethyl Ether and Propane mixture)		
<b>14.3 Transport hazard class(es)</b>	2 (2F)	2 (2F)	2 (2F)
<b>14.4 Packing group</b>	None assigned.	None assigned.	None assigned.
<b>14.5 Environmental hazards</b>	Not classified	Not classified as a Marine Pollutant.	Not classified
<b>14.6 Special precautions for user</b>	See Section: 2		
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable	Not applicable	Not applicable
<b>14.8 Additional Information</b>	Label elements: 2.1 Tunnel Code: 2 (B/D)	EmS: F-D, S-U	Forbidden on Passenger Aircraft.

## Section 15: Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- 15.1.1 EU regulations**  
Authorisations and/or Restrictions On Use None
- 15.1.2 National regulations** None
- 15.2 Chemical Safety Assessment** Not available.

## Section 16: Other Information

The following sections contain revisions or new statements: 1-16.

### References:

Existing ECHA registration(s) for Propane (CAS No. 74-98-6), Dimethyl ether (CAS No. 115-10-6), Propene (CAS No. 115-07-1)

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010.

<b>Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)</b>	<b>Classification Procedure</b>
Flam. Gas 1; H220 Liquefied gas; H280	Existing ECHA registration(s) for Propane, Propene and Dimethyl ether.

### LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic