# **SAFETY DATA SHEET**



MAPP GAS (Petroleum Gas, MAPD)

### **Section 1. Identification**

**GHS** product identifier

: MAPP GAS (Petroleum Gas, MAPD)

Other means of identification

: MAP,MAPP,Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene

Product type

: Liquefied gas

**Product use** 

: Synthetic/Analytical chemistry.

Synonym

: MAP,MAPP,Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene

SDS#

: 002015

Supplier's details

: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road

Suite 100

Radnor, PA 19087-5283

1-610-687-5253

24-hour telephone

: 1-866-734-3438

### Section 2. Hazards identification

Classification of the substance or mixture

: FLAMMABLE GASES - Category 1

GASES UNDER PRESSURE - Liquefied gas

Hazard pictograms :

Signal word

: Danger

**Hazard statements** 

: Extremely flammable gas.

May form explosive mixtures with air.

Contains gas under pressure; may explode if heated.

May cause frostbite.

May displace oxygen and cause rapid suffocation.

# Section 3. Composition/information on ingredients

Other means of identification

: MAP,MAPP,Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene

Ingredient name	%	CAS number
propylene	37 - 55	115-07-1
methyl acetylene	27 - 33	74-99-7
1,2-propadiene	13 - 15	463-49-0
isobutane	2 - 5	75-28-5
N-Butane	2 - 5	106-97-8
Propane	1 - 5	74-98-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### Section 4. First aid measures

**Skin contact** 

: Adverse symptoms may include the following:, frostbite

Ingestion

: Adverse symptoms may include the following:, frostbite

### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** 

: No specific treatment.

**Protection of first-aiders** 

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

### See toxicological information (Section 11)

### Section 5. Fire-fighting measures

### **Extinguishing media**

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: None known.

Specific hazards arising from the chemical

: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon dioxide carbon monoxide

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

### Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

#### **Environmental precautions**

: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Date of issue/Date of revision : 10/22/2018 Date of previous issue : 2/6/2018 Version : 1.01 1/12

### Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

**Small spill** 

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### Section 7. Handling and storage

### **Precautions for safe handling**

**Protective measures** 

Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling)

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

equipment.

### **Control parameters**

#### Occupational exposure limits

Ingredient name	Exposure limits	
propylene	ACGIH TLV (United States, 3/2017).  TWA: 500 ppm 8 hours.  ACGIH TLV (United States, 1/2005).  TWA: 500 ppm 8 hours. Form: All forms	
methyl acetylene	ACGIH TLV (United States, 3/2017).  TWA: 1640 mg/m³ 8 hours.  TWA: 1000 ppm 8 hours.  NIOSH REL (United States, 10/2016).  TWA: 1650 mg/m³ 10 hours.  TWA: 1000 ppm 10 hours.  OSHA PEL (United States, 6/2016).  TWA: 1650 mg/m³ 8 hours.  TWA: 1000 ppm 8 hours.  OSHA PEL 1989 (United States, 3/1989).  TWA: 1650 mg/m³ 8 hours.  TWA: 1650 mg/m³ 8 hours.  TWA: 1650 mg/m³ 8 hours.	
1,2-propadiene isobutane	None. NIOSH REL (United States, 10/2016). TWA: 1900 mg/m³ 10 hours. TWA: 800 ppm 10 hours.	

Date of issue/Date of revision : 10/22/2018 Date of previous issue : 2/6/2018 Version : 1.01 J/12

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### Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### **Respiratory protection**

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

### Thermal hazards

: If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

## Section 10. Stability and reactivity

# Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### **Hazardous polymerization**

: May Occur.

Conditions to Avoid: Elevated tempertures and pressures. Polymerization catalysts, such as metal alkyls, can cause uncontrolled polymerization. Contamination with oxygen can cause propadiene to form hazardous peroxides.

#### INHIBITORS/STABILIZERS

An ihibitor is added to the MAPD mixture to prevent potential unstable peroxide formation. Butanes (iso and/or normal) are also added to the MAPD mixture to prevent potential concentration of the methylacetylene and propadiene from reaching concentration levels that would render the mixture unstable in case of weathering off (evaporation of light components).

# Section 11. Toxicological information

### **Acute toxicity**

Product/ingredient nameResultSpeciesDoseExposureisobutaneLC50 Inhalation VaporRat658000 mg/m³4 hoursN-ButaneLC50 Inhalation VaporRat658000 mg/m³4 hours

### **Mutagenicity**

Not available.

### **Carcinogenicity**

Not available.

### **Reproductive toxicity**

Not available.

### **Teratogenicity**

Not available.

# Section 11. Toxicological information

# Information on the likely routes of exposure

Eye contact Inhalation Skin contact

- : Liquid can cause burns similar to frostbite.
- : No known significant effects or critical hazards.
- : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or

frostbite.

**Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

#### Not available.

General
 No known significant effects or critical hazards.
 Carcinogenicity
 No known significant effects or critical hazards.
 Mutagenicity
 No known significant effects or critical hazards.
 Teratogenicity
 No known significant effects or critical hazards.
 Developmental effects
 No known significant effects or critical hazards.
 Fertility effects
 No known significant effects or critical hazards.

# Section 12. Ecological information

LogP<sub>ow</sub> BCF Potential

# **Section 14. Transport information**

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according**: Not available. to Annex II of MARPOL and the IBC Code

## Section 15. Regulatory information

**U.S. Federal regulations** 

The following components are listed: PROPYLENE; PROPENE; PROPYNE; METHYL

# Section 15. Regulatory information

### Section 16. Other information

### **History**

Date of printing : 10/22/2018

Date of issue/Date of

revision

Date of previous issue Version

**Key to abbreviations** : ATE = Acute Toxicity Estimate

**References** : Not available.

### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.