

SECTION 1: Chemical Product and Company Identification

1.1. Product identifier

Product form : Substance
 Commercial name : MAPP GAS CYLINDER
 Chemical name : propene, propylene
 Index number : 601-011-00-9
 CE number : 204-062-1
 CAS no. : 115-07-1
 Product code : 521700
 Group of products : Commercial product

1.2. Uses of the substance or mix identified as relevant and uses recommended against

1.2.1. Uses identified as relevant

Intended for the general public
 Main category of use : Professional use, Use by consumers
 Use of the substance/mix : Fuel for manual torch - Use with MAPP dedicated blow torches only
 Use of the substance/mix : Products for welding and brazing, flux products
 Function or category of use : Welding and brazing agents

1.2.2. Uses recommended against

No additional information available

1.3. Material safety data sheet issued by

VIRAX SAS

39, quai Marne

CS 40197

51206 EPERNAY Cedex

Tel: +33 (0)3 26 59 56 56 - Fax: +33 (0)3 26 59 56 60

Contact: hse@virax.com

1.4. Emergency telephone

Country	Organisation/Company	Address	Emergency telephone	Comment
France	ORFILA		+33 1 45 42 59 59	

SECTION 2: Hazards Identification

2.1. Classification of the substance or mix

Classification as per the regulation (CE) No. 1272/2008 [CLP]

Extremely flammable gas, Category 1 H220

Pressurised gas: Liquefied gas H280

Complete text of the H phrases: see section 16

2.2. Labelling elements

Labelling as per the regulation (CE) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Warning mention (CLP) :

Hazard

Hazard mentions (CLP) :

H222 - Extremely flammable aerosol
 H280- Contains gas under pressure; may explode if heated

Cautionary advice (CLP) :

P102 - Keep out of reach of children
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition source. No smoking

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P377 – Leaking gas fire: Do not extinguish, unless lea 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

Safety cap for children : No
Hazard indications detectable by touch : No

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on Ingredients

3.2 Substance

Name : Propene, propylene
CAS no. : 115-07-1
Number CE : 204-062-1
Number index : 601-011-00-9

Name	Product identifier	%	Classification as per the regulation (CE) No. 1272/2008 [CLP]
propene, propylene	(CAS no.) 115-07-1 (CE number) 204-062-1 (Index number) 601-011-00-9	> 99.5	Flam. Gas 1, H220 Press. Gas H280
propane	(CAS no.) 74-98-6 (CE number) 200-827-9 (Index number) 601-003-00-5	<= 0.5	Flam. Gas 1, H220 Press. Gas H280

Text of the H phrases: see section 16.

3.2 Mix

Non determined.

SECTION 4: First Aid Measures

4.1. Description of first aid

General first aid : Never administer anything orally to an unconscious person. In case of malaise consult a physician (if possible show this label).
After inhalation : Have the person breath fresh air. Allow the victim to rest. Give oxygen or perform CPR if necessary.
After skin contact : Remove the clothing affected and wash the exposed skin parts with mild soap and water, and then rinse with warm water. Consult a physician if an irritation appears and persists.
In case of frostbite, immerse the zone concerned in tepid water (between 38 °C/100 °F and 43 °C/110 °F, without exceeding 44 °C/112 °F). Leave it immersed for 20 to 40 minutes. Seek medical assistance.
After eye contact : Rinse thoroughly with water immediately. Consult a physician if the pain or rash persist. IN CASE OF CONTACT WITH THE EYES: rinse thoroughly with water for several minutes. Remove the contact lenses if the victim wears any and if they can be easily removed. Continue rinsing.
After ingestion : Ingestion unlikely. Rinse the mouth. DO NOT induce vomiting. Consult immediately a physician.

4.2. Main symptoms and effects, acute and differed

Symptoms/lesions : Not considered as hazardous in normal conditions of use.
Exposure to a gas propagating rapidly or a vaporising liquid can cause frostbite ("cold burns"). A very high exposure may cause asphyxia by lack of oxygen. May cause drowsiness or dizziness.
Symptoms/lesions after inhalation : Asphyxia hazard by oxygen deficit.
Symptoms/lesions after contact with the skin : Contact with the vapors may cause burns on the skin and eyes; contact with liquid gas may cause frostbite.

4.3. Indication of any immediate medical care and particular treatments required

Exposure may aggravate existing respiratory conditions. Apply a symptomatic treatment.

SECTION 5: Fire Fighting Measures

5.1. Extinguishing means

Appropriate extinguishing means : Foam. Dry powder. Carbon dioxide. Sprayed water.
Sand. Inappropriate extinguishing agents : Do not use a strong water jet.

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5.2. Particular hazards resulting from the substance or mix

- Fire hazard : Extremely flammable gas.
Explosion hazard : Can form flammable/explosive vapour-air mixes.

5.3. Advice to fire fighters

- Fire fighting instructions : Cool the containers exposed by water spray or mist. Be cautious when fighting any chemical fire. Prevent any contamination of the environment by fire fighting waters. Ignited gas leak: Do not put out if the leak cannot be stopped without danger. Eliminate any sources of ignition when possible safely.
Protection in case of fire : Do not enter the fire zone without protection equipment, including a respiratory protection.

SECTION 6: Accidental Release Measures

6.1. Individual precautions, protection equipment and emergency procedures

- General measures : Move any source of ignition away. Take special precautions to avoid static electricity charges. Move any potential source of ignition away. No naked flames. Do not smoke. Evacuate the zone.

6.1.1. For non first aid workers

- Emergency procedures : Relocate non-essential personnel.

6.1.2. For first aid workers

- Protection equipment : Provide appropriate protection to the cleaning teams.
Emergency procedures : Ventilate the zone.

6.2. Precautions for the protection of the environment

Prevent penetration in the sewers and drinkable water. Notify the authorities of any penetration of liquid in the sewers or public domain water.

6.3. Confinement and cleaning methods and equipment

- Cleaning processes : Store away from other materials.
Other information : Ventilate properly, close the gas or liquid supply if possible. Contact emergency personnel immediately.

6.4. References to other sections

See section 8. Controls of personal exposure/protection.

SECTION 7: Handling and Storage

7.1. Precautions required for safe handling

- Additional hazards during treatment : Handle the empty containers carefully, as residual vapours are flammable. Flammable gas.
Precautions required for safe handling : Wash your hands and any other zone exposed with mild soap and water, before eating, drinking, smoking and before leaving work. Ensure the work zone has proper ventilation to prevent the formation of vapour. No naked flames. Do not smoke. Avoid breathing the gases. Wear personal protection equipment. Eliminate any sources of ignition when possible safely.

7.2. Safe storage conditions, including any incompatibilities

- Technical measures : Apply the appropriate grounding procedures to avoid static electricity.
Storage conditions : Store closed in a dry, fresh and very well ventilated location. Keep the containers closed when not used. Store in a location away from fire. Store in compliance with local regulations. Always secure the cylinders in the upright position and close all valves when the cylinders are not used. Protect the cylinders from any damage.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunshine. Heat sources.
Storage location : Store in a well-ventilated location.

7.3. Particular end use(s)

Fuels.

SECTION 8: Exposure Control / Personal Protection

8.1. Exposure limits

No additional information available on the date of writing of the document.

8.2. Exposure controls

- Personal protection equipment : Avoid any useless exposure.

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Hand protection	: Gloves resisting to chemicals (as per the NF EN 374 standard or equivalent). The appropriate glove shall be chosen not only according to the material, but also other quality characteristics, and differs from one manufacturer to another. Penetration time to be determined with the glove manufacturer
Eye protection	: Anti-splash or safety goggles
Protection of the airways	: Wear an appropriate mask. When the ventilation of the premises is insufficient, wear a respiratory protection device
Protection against thermal hazards	: Contact with the vapors may cause burns on the skin and eyes; contact with liquid gas may cause frostbite. Wear heat protection equipment if necessary.
Other information	: Do not eat, drink or smoke during use. Contact with the vapors may cause burns on the skin and eyes; contact with liquid gas can cause frostbite. Apply the safety instructions.

SECTION 9: Physical and Chemical Properties

9.1. Information on the main physical and chemical properties

Physical state	: Gas
Molecular mass	: 42 g/mol
Appearance	: Colorless.
Odour	: hydrocarbons.
Odour threshold	: No data available
pH	: No data available
Evaporation rate (butylic acetate =1)	: No data available
Melting point	: -185 °C
Freezing point	: 185 °C
Boiling point	: -48 °C
Flash point	: -107.8 °C
Self-ignition temperature	: 487.22 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable gas
Vapour pressure	: 1158.57 kPa at 25°C
Vapour density at 20 °C	: density at 0°C: 1.5 - gas state
Relative density	: 0.52 Liquid
Solubility	: Water: 384 mg/l
Log Pow	: 1.8
Kinematic viscosity	: No data available
Dynamic viscosity	: 0.08 mPa.s at 16.6°C
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosivity limits	: 2 - 11 vol %

9.2. Other information

VOC content	: 100 g/l
Group of gases	: Liquefied gas

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is not reactive in normal conditions of use, storage and transport.

10.2. Chemical stability

Extremely flammable gas. Stable at ambient temperature and in normal conditions of use.

10.3. Potential hazardous reactions

Reacts in contact with oxidizing substances. No polymerisation. Can form explosive mixes with the air.

10.4. Conditions to avoid

Direct sunshine. Extremely high or extremely low temperatures. Naked flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Halogens. Oxidizing agent.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Hydrocarbons.

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SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity	: Non classified Ingestion unlikely Considering the data available, the classification criteria are not met
Skin corrosion/ irritation	: Contact with the product may cause cold burns or frostbite Non classified Considering the data available, the classification criteria are not met
Severe eye lesions/ irritation	: Contact with the product may cause cold burns or frostbite Non classified Considering the data available, the classification criteria are not met
Respiratory or skin sensitization	: Non classified Considering the data available, the classification criteria are not met
Mutagenicity on germinal cells	: Non classified Considering the data available, the classification criteria are not met
Carcinogenicity	: Non classified Considering the data available, the classification criteria are not met
Toxicity for reproduction	: Non classified Considering the data available, the classification criteria are not met
Specific toxicity for certain target organs (single exposure)	: Non classified Considering the data available, the classification criteria are not met
Specific toxicity for certain target organs (repeated exposure)	: Non classified Considering the data available, the classification criteria are not met
Danger by inhaling	: Non classified Considering the data available, the classification criteria are not met
Potential adverse effects for human health and possible symptoms	: Considering the data available, the classification criteria are not met.
Other information	: Asphyxiating at high concentration.

SECTION 12: Ecological Information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

MAPP GAS CYLINDER (115-07-1)	
Persistence and degradability	Non established.

12.3. Bioaccumulation potential

MAPP GAS CYLINDER (115-07-1)	
Bioaccumulation potential	Non established.

12.4. Mobility in the soil

MAPP GAS CYLINDER (115-07-1)	
Environmental - soil	The product evaporates rapidly in the atmosphere.

12.5. Results of PBT and VPVB evaluations

No additional information available

12.6. Other adverse effects

Additional indications : Avoid spilling in the environment

SECTION 13: Disposal Considerations

13.1 Waste processing methods

Regional legislation (waste)	: Disposal to be made in compliance with legal prescriptions.
Recommendations for waste disposal	: Do not puncture or burn the packaging, even empty, after use. Empty packaging completely before disposal. Dispose this product and its container in a hazardous or special waste collection centre. Disposal to be made as per currently enforced local/national safety regulations.
Additional indications	: Handle the empty containers carefully, as residual vapours are flammable.
Environmental - waste	: Avoid spilling in the environment.

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European waste catalogue code (CED) : 16 05 04* - gas in pressurised containers (including halons) containing hazardous substances

SECTION 14: Transport Information

Complies with ADR / RID / IMDG / IATA / ADN requirements

14.1. UN number

UN no. (ADR) : 1077
UN no. (IMDG) : 1077
UN no. (IATA) : 1077
UN no. (ADN) : 1077
UN no. (RID) : Non determined.

14.2. Official UN transport designation

Official transport designation (ADR) : PROPYLENE
Official transport designation (IMDG) : PROPYLENE
Official transport designation (IATA) : Propylene
Official transport designation (ADN) : PROPYLENE
Official transport designation (RID) : Non determined.
Transport document description (ADR) : UN 1077 PROPYLENE, 2.1, (B/D)
Transport document description (IMDG) : UN 1077 PROPYLENE, 2.1

14.3. Hazard class(es) for transport

ADR

Hazard class(es) for transport (ADR) : 2.1
Hazard labels (ADR) : 2.1



IMDG

Hazard class(es) for transport (IMDG) : 2.1
Hazard labels (IMDG) : 2.1



IATA

Hazard class(es) for transport (IATA) : 2.1
Hazard labels (IATA) : 2.1



ADN

Hazard class(es) for transport (ADN) : 2.1
Hazard labels (ADN) : 2.1



RID

Hazard class(es) for transport (RID) : Non determined.

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14.4. Packaging group

Packaging group (ADR)	: Non determined.
Packaging group (IMDG)	: Non determined.
Packaging group (IATA)	: Non determined.
Packaging group (ADN)	: Non determined.
Packaging group (RID)	: Non determined.

14.5. Hazards for the environment

Hazardous for the environment	: No
Marine pollutant	: No
Other information	: No additional information available

14.6. Particular precautions to be taken by the user

- Road transport

Classification code (ADR)	: 2F
Limited quantities (ADR)	: 0
Quantities excepted (ADR)	: E0
Packaging instructions (ADR)	: P200
Particular provisions relative to common packaging (ADR)	: MP9
Instructions for mobile tankers and containers for bulk (ADR)	: (M), T50
Code-tankers (ADR)	: PxBN(M)
Special provisions for tankers (ADR)	: TA4, TT9
Transport category (ADR)	: 2
Special transport provisions - Loading, unloading and handling (ADR)	: CV9, CV10, CV36
Special transport provisions - Operation (ADR)	: S2, S20
Hazard no. °(Kemler code)	: 23
Orange signs	:



Restriction code for tunnels (ADR)	: B/D
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- Maritime transport

Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packaging instructions (IMDG)	: P200
Instructions for tankers (IMDG)	: T50
FS No. (Fire)	: F-D
FS no. (Spill)	: S-U
Loading category (IMDG)	: E
Loading and separation (IMDG)	: Clear of living quarters.
Properties and observations (IMDG)	: Flammable hydrocarbon gas. Explosive limits: 2 % to 11.1% Heavier than air (1.5).

- Air transport

Excepted quantities passenger and cargo aircraft (IATA)	: E0
Limited quantities passenger and cargo aircraft (IATA)	: Forbidden
Max net quantity for limited quantity passenger and cargo aircraft (IATA)	: Forbidden
Packaging instructions passenger and cargo aircraft (IATA)	: Forbidden
Max net quantity for passenger and cargo aircraft (IATA)	: Forbidden

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Packaging instructions cargo only aircraft (IATA) : 200
 Max net quantity cargo only aircraft (IATA) : 150kg
 Special provisions (IATA) : A1
 ERG code (IATA) : 10L

- River transport

Classification code (ADN) : 2F
 Limited quantities (ADN) : 0
 Quantities excepted (ADN) : E0
 Transport accepted (ADN) : T
 Equipment required (ADN) : PP, EX, A
 Ventilation (ADN) : VE01
 Number of blue cones/lights (ADN) : 1

- Rail transport

No data available

14.7. Bulk transport compliant with appendix II of the MARPOL 73/78 convention and IBC leaflet

Non determined.

SECTION 15: Regulatory Information

15.1. Regulations/legislation specific to the substance or mix in terms of safety, health and the environment

15.1.1. UE regulations

The following restrictions are applicable according to appendix XVII of Regulation (CE) No. 1907/2006 (REACH):

3.a. Substances or mixes meeting the criteria for one of the hazard classes or categories below, covered in appendix I of regulation (CE) no. 1272/2008 Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	MAPP GAS CYLINDER - propane - propene, propylene
40 Substances classified as flammable gasses, category 1 or 2, flammable liquids, category 1, 2 or 3, flammable solid materials, category 1 or 2, substances and mixes which, in contact with water, generate flammable gases, category 1, 2 or 3, pyrophoric liquids, category 1, or pyrophoric solid materials, category 1, whether they are included to appendix VI, part 3, of regulation (CE) no. 1272/2008 or not.	MAPP GAS CYLINDER - propane - propene, propylene

PROPYLENE is not on the REACH Candidate list

Contains no substance in the REACH candidate list

PROPYLENE is not listed in Appendix XIV of REACH

Contains no substance listed in Appendix XIV of REACH

VOC content : 100 g/l

15.1.2. National directives

Check that all national or local regulations are observed

France			
ICPE No.	Classified installations SECTION designation	Load code	Radius
4310.text	Flammable gases category 1 and 2		
4310.1	The total quantity likely to be present in the installations including in underground cavities being: 1 Above or equal to 10 t Low threshold quantity in the meaning of article R. 511-10 : 10 t High threshold quantity in the meaning of article R. 511-10 : 50 t.	A	2
4310.2	The total quantity likely to be present in the installations including in underground cavities being: 2 Above or equal to 1 t and below 10 t Low threshold quantity in the meaning of article R. 511-10: 10 t High threshold quantity in the meaning of article R. 511-10 : 50 t.	DC	
4330.text	Flammable liquids category 1, flammable liquids maintained at a temperature above their boiling point, other liquids with a flash point below or equal to 60°C maintained at a temperature above their boiling temperature or in particular treatment conditions, such as a high pressure or temperature (1).		
4330.1	The total quantity likely to be present in the installations including in underground cavities being: 1 Above or equal to 10 t	A	2

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	(1) In compliance with section 2.6.4.5 of appendix I of regulation (CE) no. 1272/2008, it is not necessary to classify liquids with a flash point above 35° C into category 3 if the combustion proof test maintained of point L 2, part III, section 32, of the Manual of proof testing and criteria of the United Nations has given negative results. However, this remark is not valid in the case of a high temperature or pressure, and these liquids must then be classified into this category Low threshold quantity in the meaning of article R. 511-10 : 10t High threshold quantity in the meaning of article R. 511-10 : 50 t.		
4330.2	The total quantity likely to be present in the installations including in underground cavities being: 2 Above or equal to 1 t but below 10 t (1) In compliance with section 2.6.4.5 of appendix I of regulation (CE) no. 1272/2008, it is not necessary to classify liquids with a flash point above 35° C into category 3 if the combustion proof test maintained of point L 2, part III, section 32, of the Manual of proof testing and criteria of the United Nations has given negative results. However, this remark is not valid in the case of a high temperature or pressure, and these liquids must then be classified into this category Low threshold quantity in the meaning of article R. 511-10 : 10t High threshold quantity in the meaning of article R. 511-10 : 50 t.	DC	

15.2. Chemical safety evaluation

No chemical safety evaluation has been made

SECTION 16: Other information

Change indication:			
	Skin corrosion/skin irritation - remark	Added	
	UE MSDS format	Added	
	Severe eye lesions/eye irritation - remark	Amended	
4.1	First aid after contact with the skin	Amended	
4.1	First aid after inhalation	Amended	
4.1	First aid after eye contact	Amended	
6.1	General measures	Amended	
6.3	Other information	Added	
7.1	Precautions required for safe handling	Amended	
7.2	Storage conditions	Amended	
7.3	Specific final uses	Added	
8.2	Protection against thermal hazards	Added	
8.2	Other information	Amended	
8.2	Protection of the respiratory tract	Amended	
8.2	Hand protection	Amended	
9.1	Solubility in water	Added	
9.1	Relative vapour density at 20 °C	Amended	
9.1	Molecular mass	Amended	
9.1	Relative density	Amended	
10.1	Reactivity	Added	
10.2	Chemical stability	Amended	
10.3	Potential hazardous reactions	Amended	
10.5	Incompatible materials	Amended	
10.6	Hazardous decomposition products	Amended	
11.1	Additional indications	Added	
12.4	Environmental - soil	Added	
16	Training advice	Added	

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Abbreviations and acronyms:	
REACH	Registration, evaluation, authorisation and restriction of chemical substances. Regulation (EU) REACH No. 1907/2006
MSDS	Material Safety Data Sheet
CLP	Regulation relative to the classification, labelling and packaging; regulation (CE) no. 1272/2008
DSD	Directive 67/548/CEE relative to hazardous substances
DPD	Directive 1999/45/CE relative to hazardous preparations
ADR	European agreement relative to international transport of hazardous freight by Road
ADN	European agreement relative to international transport of hazardous freight by interior navigation ways
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	International regulation on the transport of hazardous goods by rail
OECD	Organisation for economical cooperation and development
TLM	Median limit tolerance
ATE	Acute toxicity estimate
EC50	Effective median concentration
CL50	Lethal concentration for 50 % population tested (median lethal concentration)
LD50	Lethal dose for 50 % population tested (median lethal dose)
PBT	Persistent, bioaccumulable and toxic
vPvB	Very persistent and very bioaccumulable

Data sources : REGULATION (CE) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND COUNCIL of 16 December 2008 relative to the classification, labelling and packaging of substances and mixes, amending and abrogating the directives 67/548/CEE and 1999/45/CE and amending regulation (CE) no.1907/2006.

Training advice : This product is intended exclusively for the use described on its packaging. Follow the recommendations of use, storage, maintenance and replacement.

Other information : Check that all national or local regulations are observed.

Complete text of the H and EUH phrases:	
Flam. Gas 1	Flammable gases, Category 1
Liquefied gas	Pressurised gas: Liquefied gas
Press. Gas	Pressurised gas
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

FDS UE (Appendix II REACH)

This information is based on our current knowledge and describe the product for the sole needs of health, safety and the environment. Therefore, it should not be interpreted as guaranteeing any specific property of the product