

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 11/02/2022 Revision date: 11/02/2022 Supersedes version of: 18/03/2016 Version: 3.0

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

1.1. Product identifier

Product form	: Substance
Trade name	: GAZ MAPP
Chemical name	: propene; propylene
EC Index-No.	: 601-011-00-9
EC-No.	: 204-062-1
CAS-No.	: 115-07-1
REACH registration No	: 01-2119447103-50
Product code	: 521700
Formula	: C3H6
Product group	: Trade product

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

1.2.1. Relevant identified uses

Intended for general public Main use category Use of the substance/mixture

: Professional use,Consumer use: Welding and soldering agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

VIRAX SAS 39, quai Marne - CS 40197 FR– 51206 EPERNAY Cedex T +33 (0)3 26 59 56 56 - F +33 (0)3 26 59 56 60 hse@virax.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	NHS 111/NHS 24/NHS Direct		111	or call a doctor
			0845 4647	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]	
Flammable gases, Category 1A	H220
Gases under pressure : Liquefied gas	H280

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Contains gas under pressure; may explode if heated. Extremely flammable gas.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



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	GHS02 GHS04
Signal word (CLP)	: Danger
Hazard statements (CLP)	: H220 - Extremely flammable gas.
	H280 - Contains gas under pressure; may explode if heated.
Precautionary statements (CLP)	: P102 - Keep out of reach of children.
	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
	No smoking.
	P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
	P381 - In case of leakage, eliminate all ignition sources.
	P410+P403 - Protect from sunlight. Store in a well-ventilated place.
Child-resistant fastening	: Not applicable
Tactile warning	: Applicable
2.3. Other hazards	

Other hazards which do not result in classification : Can form explosive mixture with air. Contact with the liquid the may cause cold

burns/frostbite. May cause suffocation by reducing oxygen available for breathing.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
propene; propylene (115-07-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

	: VIRAX_024_BOUTEILLE GAZ MAPP_521700_EN : 115-07-1
EC-No.	204-062-1
EC Index-No.	: 601-011-00-9

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propene; propylene	CAS-No.: 115-07-1	≤ 100	Flam. Gas 1, H220
(Note U)	EC-No.: 204-062-1		Press. Gas (Liq.), H280
	EC Index-No.: 601-011-00-9		
	REACH-no: 01-		
	2119447103-50		

Full text of H- and EUH-statements: see section 16

Note U (Table 3): When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest. Give oxygen or artificial respiration if necessary.

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First-aid measures after skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Ingestion unlikely.
4.2. Most important symptoms and e	ffects, both acute and delayed
Symptoms/effects after inhalation	: Suffocation hazard by lack of oxygen. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause headache, nausea and irritation of respiratory tract.
Symptoms/effects after skin contact	: Contact with vapour causes burns to skin and eyes and contact with liquid causes freezing.

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

Treat symptomatically. Depending on the degree of exposure, periodic medical surveillance is required.

SECTION 5: Firefighting measures		

5.1. Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	Dry powder. Water spray.Do not use a heavy water stream. Carbon dioxide (CO2).
5.2. Special hazards arising from the subst	tance or mixture
Fire hazard	: Extremely flammable gas. The vapours are denser than air and may travel along the ground. Distance ignition possible.
Explosion hazard	: May form flammable/explosive vapour-air mixture. Contains gas under pressure; may explode if heated.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.
5.3. Advice for firefighters	
Precautionary measures fire	· Evacuate area

Precautionary measures fire	: Evacuate area.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Leaking gas fire: Do
	not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Protection during firefighting	 Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate area. Remove ignition sources. Use special care to avoid static electric charges. Eliminate every possible source of ignition. No open flames. No smoking. Act in accordance with local emergency plan. Do not breathe gas/fumes/vapour/spray. Advise local authorities if considered necessary. Avoid contact with skin and eyes.
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8. "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

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6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Store away from other materials. Notify authorities if product enters sewers or public waters.
eave the product to evaporate.
/entilate well. Dispose of materials or solid residues at an authorized site.
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6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage 7.1. Precautions for safe handling Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Flammable gas. Precautions for safe handling : Ensure good ventilation of the work station. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Avoid breathing gas, vapours. Wear personal protective equipment. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Only experienced and properly instructed persons should handle gases under pressure. Avoid contact with skin, eyes and clothing. Hygiene measures : Do not eat, drink or smoke when using this product. Remove contaminated clothes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. 7.2. Conditions for safe storage, including any incompatibilities

Technical measures Storage conditions	 Proper grounding procedures to avoid static electricity should be followed. Store tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place. Store according to local legislation. Protect from sunlight. Store in a well-ventilated place. Keep cool. Systems under pressure should be regularily checked for leakages.
Incompatible products	: Combustible materials.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Heat and ignition sources	: Keep away from open flames, hot surfaces and sources of ignition. Keep away from any
	flames or sparking source.
Storage area	: Store in a well-ventilated place. Always keep container in upright position.
Special rules on packaging	: DO NOT REMOVE THIS PRODUCT LABEL (or equivalent wording).

7.3. Specific end use(s)

See Section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

propene; propylene (115-07-1)		
DNEL/DMEL (Workers)		
Acute - systemic effects, inhalation	860 mg/m ³	
Acute - local effects, inhalation	860 mg/m ³	
PNEC (Water)	·	
PNEC aqua (freshwater)	1,38 mg/l	
PNEC aqua (marine water)	1,38 mg/l	

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. Safety glasses with side shields. Face shield

8.2.2.2. Skin protection

Skin and body protection:

Wear fire/flame resistant/retardant clothing. Safety toe footwear

Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Time of penetration is to be checked with the glove producer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Antistatic gloves	Neoprene rubber (HNBR)				EN 388
Gloves made of insulating material	Nitrile rubber (NBR)				EN 511

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask. In case of inadequate ventilation wear respiratory protection. Gas mask with filter type AX

8.2.2.4. Thermal hazards

Thermal hazard protection:

Contact with vapour causes burns to skin and eyes and contact with liquid causes freezing. Protect from sunlight.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Consumer exposure controls:

Always wash hands after handling the product. Do not eat, drink or smoke when using this product.

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Other information:

Do not eat, drink or smoke during use. Contact with vapour causes burns to skin and eyes and contact with liquid causes freezing. Comply with the safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless.
Molecular mass	: 42 g/mol
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: -185 °C
Freezing point	: -185 °C
Boiling point	: -48 °C
Flammability	: Extremely flammable gas.
Explosive limits	: Not available
Lower explosion limit	: 1,9 – 5,3 vol %
Upper explosion limit	: 8,5 – 15 vol %
Flash point	: -108 °C
Auto-ignition temperature	: 455 °C
Decomposition temperature	: Not available
рН	: Not applicable for gases and gas mixtures.
Viscosity, kinematic	: Not applicable
Solubility	: Water: 380 mg/l
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 1,8
Vapour pressure	: < 1071 kPa
Vapour pressure at 50 °C	: Not available
Density	: Not applicable
Relative density	: 1,49
Relative vapour density at 20 °C	: Not available
Relative gas density	: 1,5
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard class	ses
No additional information available	
9.2.2. Other safety characteristics	
Gas group	: Press. Gas (Liq.)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Extremely flammable gas.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Can form explosive mixture with air. Exothermic reaction on contact with : Oxidising agents.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Overheating. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as de	fined in Regulation (EC) No 1272/2008
Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data)
Additional information	: Ingestion unlikely May form an explosive mixture in the presence of air
Skin corrosion/irritation	 Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data) pH: Not applicable for gases and gas mixtures.
Additional information	: May cause frostbite on contact with liquefied gas
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met. Technical
	impossibility to obtain the data) pH: Not applicable for gases and gas mixtures.
Additional information	: May cause frostbite on contact with liquefied gas
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met. Technical
	impossibility to obtain the data)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met. Technical impossibility to obtain the data)
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met. Technical
Additional information	impossibility to obtain the data) Ingestion is not considered a potential route of exposure
11.2. Information on other hazards	
11.2.1. Endocrine disrupting properties	
No additional information available	
11.2.2. Other information	
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met, May cause frostbite
Other information	: Asphyxiant in high concentrations

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

NOEC chronic algae

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Hazardous to the aquatic environment, short-term : (acute)	Not classified (Based on available data, the classification criteria are not met)
	Not classified (Based on available data, the classification criteria are not met)
propene; propylene (115-07-1)	
LC50 - Fish [1]	51,7 mg/l Quantitative structure-activity relationship (QSAR)
EC50 - Crustacea [1]	28,2 mg/l Quantitative structure-activity relationship (QSAR)
EC50 96h - Algae [1]	12,1 mg/l Quantitative structure-activity relationship (QSAR)

4,5 mg/l

12.2. Persistence and degradability

GAZ MAPP (115-07-1)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

GAZ MAPP (115-07-1)	
Partition coefficient n-octanol/water (Log Pow)	1,8
propene; propylene (115-07-1)	
Partition coefficient n-octanol/water (Log Pow)	1,77

12.4. Mobility in soil

GAZ MAPP (115-07-1)

Ecol	ogy	- soil
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Product evaporates rapidly when in contact with the air.

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects	: Product evaporates when in contact with the air
Additional information	: Avoid release to the environment.

SECTION 13: Disposal considerations	

13.1. Waste treatment methods

Regional legislation (waste) Waste treatment methods	 Disposal must be done according to official regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions. Avoid discharge to atmosphere. For more information, see 'EIGA Safety Info 30' at
Product/Packaging disposal recommendations	 www.eiga.eu. Following use, do not pierce or burn the packaging, even if it is empty. Empty the packaging completely prior to disposal. Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	 Code Waste to be completed according to the use and the list of Decision 2000/352 / EC 16 05 04* - gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport information	
In accordance with ADR / IMDG / IATA / ADN / RID	

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ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID r	number	I	I	I
UN 1077	UN 1077	UN 1077	UN 1077	UN 1077
14.2. UN proper shippin	ng name			
PROPYLENE	PROPYLENE	Propylene	PROPYLENE	PROPYLENE
Transport document desc	ription			
UN 1077 PROPYLENE,	UN 1077 PROPYLENE,	UN 1077 Propylene, 2.1	UN 1077 PROPYLENE,	UN 1077 PROPYLENE,
2.1, (B/D)	2.1		2.1	2.1
14.3. Transport hazard	class(es)			
2.1	2.1	2.1	2.1	2.1
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental ha	zards			
Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the	Dangerous for the
environment: No	environment: No	environment: No	environment: No	environment: No
	Marine pollutant: No			
No supplementary information	on available	·	•	•

14.6. Special precautions for user

Overland transport	
Classification code (ADR)	: 2F
Special provisions (ADR)	: 662
Limited guantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P200
Mixed packing provisions (ADR)	: MP9
Portable tank and bulk container instructions (ADR)	: (M), T50
Tank code (ADR)	: PxBN(M)
Tank special provisions (ADR)	: TA4, TT9
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading	: CV9, CV10, CV36
and handling (ADR)	
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 23
Orange plates	23
	1077
Tunnel restriction code (ADR)	: B/D
EAC code	: 2YE
T	
Transport by sea	
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0 : P200
Packing instructions (IMDG)	: T50
Tank instructions (IMDG)	. 150 : F-D
EmS-No. (Fire)	: S-U
EmS-No. (Spillage) Stowage category (IMDG)	. S-0 : E
Stowage and handling (IMDG)	: E : SW2
Properties and observations (IMDG)	: Flammable hydrocarbon gas. Explosive limits: 2 % to 11.1% Heavier than air (1.5).
	. Tranimable hydrocarbon gas. Explosive limits. 2 70 to 11.170 neavier than all (1.3).
Air transport	
PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
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PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) Special provisions (IATA) ERG code (IATA)	::	Forbidden Forbidden 200 150kg A1 10L
Inland waterway transport Classification code (ADN) Special provisions (ADN) Limited quantities (ADN) Excepted quantities (ADN) Carriage permitted (ADN) Equipment required (ADN) Ventilation (ADN) Number of blue cones/lights (ADN)	:	2F 662 0 E0 T PP, EX, A VE01 1
Rail transport Classification code (RID) Special provisions (RID) Limited quantities (RID) Excepted quantities (RID) Packing instructions (RID) Mixed packing provisions (RID) Portable tank and bulk container instructions (RID) Tank codes for RID tanks (RID) Special provisions for RID tanks (RID) Transport category (RID) Special provisions for carriage - Loading, unloading and handling (RID)		2F 662 0 E0 P200 MP9 T50(M) PxBN(M) TU38, TE22, TA4, TT9, 2 CW9, CW10, CW36
Colis express (express parcels) (RID) Hazard identification number (RID)	:	CE3 23

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)				
Reference code	ference code Applicable on Entry title or description			
40.	GAZ MAPP ; propene; propylene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.		

TM6

GAZ MAPP is not on the REACH Candidate List

GAZ MAPP is not on the REACH Annex XIV List

GAZ MAPP is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

GAZ MAPP is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

GAZ MAPP is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

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Directive 2012/18/EU (SEVESO III)

Qualifying quantity (tonnes)	
Lower-tier	Upper-tier
50	200
	Lower-tier

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Ensure all national/local regulations are observed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes					
Section	Changed item	Change	Comments		
	UN-No. (RID)	Modified			
	Classification code (RID)	Modified			
1.1	Trade name	Modified			
1.1	Formula	Added			
1.1	REACH registration No	Added			
1.2	Use of the substance/mixture	Added			
2.1	Adverse physicochemical, human health and environmental effects	Added			
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified			
2.3	Other hazards not contributing to the classification	Added			
3	Composition/information on ingredients	Modified			
4.1	First-aid measures after ingestion	Modified			
4.1	First-aid measures after skin contact	Modified			
4.1	First-aid measures after inhalation	Modified			
4.2	Symptoms/effects after inhalation	Modified			
4.3	Other medical advice or treatment	Added			
5.1	Unsuitable extinguishing media	Modified			
5.1	Suitable extinguishing media	Modified			
5.2	Fire hazard	Modified			
5.2 Explosion hazard		Modified			
5.2 Hazardous decomposition products in case of fire		Added			
5.3	EAC code	Added			
5.3	Precautionary measures fire	Added			
5.3	Protection during firefighting	Modified			
6.1	General measures	Modified			
6.1	Protective equipment	Modified			
6.1	Emergency procedures	Modified			
6.2	Environmental precautions	Modified			
6.3	Methods for cleaning up	Modified			
6.3	Other information	Modified			
6.4	Reference to other sections (8, 13)	Modified			
7.1	Hygiene measures	Added			
7.1	Precautions for safe handling	Modified			
7.2	Heat and ignition sources	Added			
7.2	Special rules on packaging	Added			
7.2	Storage area	Modified			
7.2	Incompatible products	Modified			
7.2	Storage conditions	Modified			
7.3	Specific end uses	Modified			

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8.2	Concurrer expective controle	Added
	Consumer exposure controls	
8.2 8.2	Thermal hazard protection	Modified
-	Respiratory protection	Modified Madified
8.2	Hand protection	Modified
8.2	Eye protection	Modified
8.2	Skin and body protection	Added
8.2	Personal protective equipment	Modified
8.2	Environmental exposure controls	Added
8.2	Appropriate engineering controls	Added
9.1	Upper explosive limit (UEL)	Added
9.1	pH	Added
9.1	Lower explosive limit (LEL)	Added
9.1	Relative gas density	Added
9.1	Solubility in water	Modified
9.1	Odour	Modified
9.1	Auto-ignition temperature	Modified
9.1	Vapour pressure	Modified
9.1	Relative density	Modified
9.1	Flash point	Modified
10.1	Reactivity	Modified
10.3	Possibility of hazardous reactions	Modified
10.4	Conditions to avoid	Modified
10.5	Incompatible materials	Modified
10.6	Hazardous decomposition products	Modified
11.1	Additional information	Modified
12.1	Ecology - general	Added
12.2	Persistence and degradability	Modified
13.1	European List of Waste (LoW) code	Modified
13.1	Waste treatment methods	Added
14.1	UN-No. (IMDG)	Modified
14.1	UN-No. (IATA)	Modified
14.1	UN-No. (ADN)	Modified
14.1	UN-No. (ADR)	Modified
14.2	Proper Shipping Name (ADN)	Modified
14.2	Proper Shipping Name (ADR)	Modified
14.6	Limited quantities (ADR)	Modified
14.6	Special provisions (ADR)	Modified
14.6	Packing instructions (IMDG)	Modified
14.6	Special provisions (ADN)	Modified
14.6	Hazard identification number (Kemler No.)	Added
14.6	Tunnel restriction code (ADR)	Modified
14.6	Classification code (ADR)	Modified
16	Data sources	Modified
16	Abbreviations and acronyms	Modified

Abbreviations and acronyms:		
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
SDS	Safety Data Sheet	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
DSD	Dangerous Substances Directive 67/548/EEC	
DPD	Dangerous Preparations Directive 1999/45/EC	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
OECD	Organisation for Economic Co-operation and Development	
TLM	Median Tolerance Limit	
ATE	Acute Toxicity Estimate	
EC50	Median effective concentration	

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EN	European Standard
IARC	International Agency for Research on Cancer
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PNEC	Predicted No-Effect Concentration
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
ED	Endocrine disrupting properties
IOELV	Indicative Occupational Exposure Limit Value
TRGS	Technical Rules for Hazardous Substances
WGK	Water Hazard Class

Data sources

Training advice

Other information

 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. 17 ATP Inserted / Updated.
 Normal use of this product shall imply use in accordance with the instructions on the

: Normal use of this product shall imply use in accordance with the instructions on the packaging. Follow advice on use, storage, maintenance and replacement.

: Ensure all national/local regulations are observed. DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:		
Flam. Gas 1	Flammable gases, Category 1	
Flam. Gas 1A	Flammable gases, Category 1A	
H220	Extremely flammable gas.	
H280	Contains gas under pressure; may explode if heated.	
Press. Gas (Liq.)	Gases under pressure : Liquefied gas	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.