

## ethylene, liquefied, under pressure

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

## 1.1 Product identifier:

Product name	: ethylene, liquefied, under pressure
Synonyms	: ethene, liquefied, under pressure; ethylene; acetene, liquefied, under pressure; bicarburetted hydrogen, liquefied, under pressure; bicarburetted hydrogen, liquefied, under pressure; carburetted hydrogen, heavy, liquefied, under pressure; dicarburetted hydrogen, liquefied, under pressure; elayl, liquefied, under pressure; etherin, liquefied, under pressure; ethylene, liquefied, under pressure; ethylene, pure; heavy carburetted hydrogen, liquefied, under pressure; olefiant gas, liquefied, under pressure; R1150, liquefied, under pressure
Product type REACH	: Substance/mono-constituent (Organic)
CAS number	: 74-85-1
EC index number	: 601-010-00-3
EC number	: 200-815-3
RTECS number	: KU5340000
Molecular mass	: 28.05 g/mol
Formula	: C <sub>2</sub> H <sub>4</sub>

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

1.2.1 Relevant identified uses

Synthetic material production  
Growth regulator

1.2.2 Uses advised against

See heading 15.1: Reach Annex XVII - Restriction

## 1.3 Details of the supplier of the safety data sheet:

Supplier of the SDS

CHEMOGAS NV  
Westvaardijk 85  
B-1850 Grimbergen Belgium  
Tel: +32 2 251 60 87  
Fax: +32 2 252 17 51  
info@chemogas.com

Distributor of the substance

CHEMOGAS NV  
Westvaardijk 85  
B-1850 Grimbergen Belgium  
Tel: +32 2 251 60 87  
Fax: +32 2 252 17 51  
info@chemogas.com

## 1.4 Emergency telephone number:

24h/24h: +32 14 58 45 45 (BIG)

## SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture:

## 2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statement code(s)
Flam. Gas	category 1	H220: Extremely flammable gas.
Press. Gas	Liquefied gas	H280: Contains gas under pressure; may explode if heated.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

## 2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

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F+; R12 - Extremely flammable.

R67 - Vapours may cause drowsiness and dizziness.

## 2.2 Label elements:

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

Hazard pictograms



Signal word

Danger

H-statements

- H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
H336 May cause drowsiness or dizziness.

P-statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P261 Avoid breathing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P381 Eliminate all ignition sources if safe to do so.  
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

## 2.3 Other hazards:

### CLP

Substance does not meet the screening criteria for persistency nor bioaccumulation so is neither PBT nor vPvB

May build up electrostatic charges: risk of ignition

May be ignited by sparks

Gas/vapour spreads at floor level: ignition hazard

Heat may cause pressure rise in tanks/drums: explosion risk

May cause frostbites

Slightly irritant to respiratory organs

Harmful to fishes

Harmful to invertebrates (Daphnia)

Harmful to algae

## SECTION 3: Composition/information on ingredients

### 3.1 Substances:

Name (REACH Registration No)	CAS No EC No	Conc.	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
ethylene	74-85-1 200-815-3		F+; R12 R67	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280 STOT SE 3; H336	(1)(2)	Mono-constituent

(1) For R-phrases and H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

### 3.2 Mixtures:

Not applicable

## SECTION 4: First aid measures

### 4.1 Description of first aid measures:

#### General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

#### After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

#### After skin contact:

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Rinse with water. Take victim to a doctor if irritation persists. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

### After eye contact:

Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

### After ingestion:

Not applicable.

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

### 4.2.1 Acute symptoms

#### After inhalation:

Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Headache. Nausea. Dizziness. Narcosis. Feeling of weakness. Rapid respiration. Accelerated heart action. Coordination disorders. Disturbances of consciousness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.

#### After skin contact:

Frostbites.

#### After eye contact:

Frostbites.

#### After ingestion:

Not applicable.

### 4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media:

#### 5.1.1 Suitable extinguishing media:

Polyvalent foam. BC powder. Carbon dioxide. Dry sand. Water spray.

#### 5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

### 5.2 Special hazards arising from the substance or mixture:

Upon combustion CO and CO<sub>2</sub> are formed. Polymerizes on exposure to temperature rise and upon a rise of pressure.

### 5.3 Advice for firefighters:

#### 5.3.1 Instructions:

If no hazard for/from the surroundings: controlled burning. If hazardous substances are nearby: consider extinguishment. Extinguish only if gas supply/leak can be shut afterwards. Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion.

#### 5.3.2 Special protective equipment for fire-fighters:

Compressed air/oxygen apparatus. Large spills/in enclosed spaces: compressed air apparatus. Protective clothing. Insulating gloves.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Keep upwind. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Avoid ingress of water in the containers.

#### 6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

#### 6.1.2 Protective equipment for emergency responders

Insulating gloves. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

#### Suitable protective clothing

See heading 8.2

### 6.2 Environmental precautions:

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Tip the container on one side to stop the leakage. Try to reduce evaporation. Prevent spreading in sewers.

### 6.3 Methods and material for containment and cleaning up:

Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4 Reference to other sections:

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See heading 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1 Precautions for safe handling:

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards.

### 7.2 Conditions for safe storage, including any incompatibilities:

#### 7.2.1 Safe storage requirements:

Provide for a tub to collect spills. Provide the tank with earthing. Under a shelter/in the open. Detached building. Meet the legal requirements. < 52 °C. Store in a cool area. Keep out of direct sunlight. Keep container in a well-ventilated place. Fireproof storeroom. Provide for an automatic sprinkler system.

#### 7.2.2 Keep away from:

Combustible materials, oxidizing agents, (strong) acids, halogens, gases.

#### 7.2.3 Suitable packaging material:

Steel, stainless steel, monel steel, aluminium, copper, polyethylene.

#### 7.2.4 Non suitable packaging material:

No data available

### 7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer .

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters:

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

##### Indicative exposure limit (the Netherlands)

Ethyleen	Short time value	1200 mg/m <sup>3</sup>	
	Short time value, calculated	1029 ppm	
	Time-weighted average exposure limit 8 h	330 mg/m <sup>3</sup>	
	Time-weighted average exposure limit, calculated	283 ppm	

##### Limit Value (Belgium)

Ethylène	Short time value	- ppm - mg/m <sup>3</sup>	
	Time-weighted average exposure limit 8 h	200 ppm 233 mg/m <sup>3</sup>	

##### TLV (USA)

Ethylene	Short time value	-	
	Time-weighted average exposure limit 8 h	200 ppm	

##### b) National biological limit values

If limit values are applicable and available these will be listed below.

#### 8.1.2 Sampling methods

If applicable and available it will be listed below.

#### 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

#### 8.1.4 DNEL/PNEC values

If applicable and available it will be listed below.

#### 8.1.5 Control banding

If applicable and available it will be listed below.

### 8.2 Exposure controls:

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#### 8.2.1 Appropriate engineering controls

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Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

#### b) Hand protection:

Insulated gloves.

- materials for protective clothing (good resistance)

Butyl rubber, chlorinated polyethylene, neoprene, polyethylene, viton.

#### c) Eye protection:

Protective goggles.

#### d) Skin protection:

Protective clothing.

### 8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

Physical form	Gas
Odour	Sweet odour
	Almost odourless
Odour threshold	> 239 ppm
Colour	Colourless
Particle size	Not applicable (gas)
Explosion limits	2.7 - 36 vol %
	31 - 390 g/m <sup>3</sup>
Flammability	Extremely flammable gas.
Log Kow	0.053/1.13
Dynamic viscosity	0.01 mPa.s ; 27 °C
Kinematic viscosity	No data available
Melting point	-169 °C
Boiling point	-104 °C
Flash point	No data available
Evaporation rate	No data available
Vapour pressure	41000 hPa ; 0 °C
Relative vapour density	0.98
Solubility	water ; 0.13 g/100 ml
	ether ; soluble
Relative density	0.60 ; -104 °C
Decomposition temperature	315 °C
Auto-ignition temperature	425 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

#### Physical hazards

Flammable gas

Gas under pressure

### 9.2 Other information:

Minimum ignition energy	0.070 mJ
Specific conductivity	< 10000 pS/m
Surface tension	0.016 N/m ; -104 °C

## SECTION 10: Stability and reactivity

### 10.1 Reactivity:

May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Substance has neutral reaction.

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## 10.2 Chemical stability:

Stable under normal conditions.

## 10.3 Possibility of hazardous reactions:

May polymerize on exposure to some compounds: (increased) risk of fire/explosion. Reacts violently with many compounds e.g.: with (strong) oxidizers, with (some) halogens compounds and with (some) acids: (increased) risk of fire/explosion.

## 10.4 Conditions to avoid:

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

## 10.5 Incompatible materials:

Combustible materials, oxidizing agents, (strong) acids, halogens, gases.

## 10.6 Hazardous decomposition products:

Upon combustion CO and CO<sub>2</sub> are formed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects:

#### 11.1.1 Test results

#### Acute toxicity

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	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Inhalation (gases)	LC50		>57000 ppm	4 h	Rat	Male	Experimental value

#### Conclusion

Low acute toxicity by the inhalation route

#### Corrosion/irritation

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No data available

#### Conclusion

No data available

#### Respiratory or skin sensitisation

ethylene, liquefied, under pressure

No data available

#### Conclusion

No data available

#### Specific target organ toxicity

ethylene, liquefied, under pressure

	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
Inhalation (gases)	LOAEC	OECD 413	300 ppm			13 weeks (6h/day, 5 days/week)	Rat	Male/ female	Experimental value

#### Conclusion

Low sub-chronic toxicity by inhalation route

#### Mutagenicity (in vitro)

ethylene, liquefied, under pressure

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 471	Bacteria (S.typhimurium)		Experimental value
Negative	OECD 473	Chinese hamster ovary (CHO)		Experimental value

#### Mutagenicity (in vivo)

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Result	Method	Exposure time	Test substrate	Gender	Organ	Value determination
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Negative	OECD 474: Mammalian Erythrocyte Micronucleus Test	4 (3000 ppm) weeks (6h/day, 5 days/week)	Rat	Male		Experimental value
Negative	EPA OTS 798.5395	13 (10000 ppm) weeks (6h/day, 5 days/week)	Rat	Male/female		Experimental value

### Carcinogenicity

#### ethylene, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination	Organ	Effect
Inhalation (gases)	NOAEC	OECD 453	3000 ppm	106 weeks (6h/day, 5 days/week)	Rat	Male/female	Experimental value		No effect

### Reproductive toxicity

#### ethylene, liquefied, under pressure

	Parameter	Method	Value	Exposure time	Species	Gender	Effect	Organ	Value determination
Effects on fertility	NOAEC	OECD 421	5000 ppm	4 weeks (6h/day, 7 days/week)	Rat	Male/female	No effect		Experimental value
Developmental toxicity	NOAEC	OECD 421	5000 ppm	2 weeks (6h/day, 7 days/week)	Rat	Male/female	No effect		Experimental value

### Conclusion CMR

- Not classified for carcinogenicity
- Not classified for mutagenic or genotoxic toxicity
- Not classified for reprotoxic or developmental toxicity

### Toxicity other effects

#### ethylene, liquefied, under pressure

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
				Drowsiness, dizziness				literature

### Conclusion

- May cause drowsiness or dizziness.

## SECTION 12: Ecological information

### 12.1 Toxicity:

#### ethylene, liquefied, under pressure

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	ECOSAR	96-141 ppm	96 h	Pisces			QSAR
Acute toxicity invertebrates	LC50	ECOSAR	48 mg/l	48 h	Daphnia sp.			QSAR
Toxicity algae and other aquatic plants	EC50		69.7 mg/l	72 h	Algae			QSAR
Long-term toxicity fish	LC50	ECOSAR	96 mg/l	14 day(s)	Pisces			QSAR

### Conclusion

- Harmful to fishes
- Harmful to invertebrates (Daphnia)
- Harmful to algae

### 12.2 Persistence and degradability:

#### ethylene, liquefied, under pressure

##### Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	1.9 day(s)	500000 /cm <sup>3</sup>	literature

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## Conclusion

Literature reports: readily degradable in water  
Inherently biodegradable

## 12.3 Bioaccumulative potential:

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### BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		4	2-304 day(s)	Pimephales promelas	QSAR

### Log Kow

Method	Value	Temperature	Value determination
	0.053/1.13		Test data

## Conclusion

Low potential for bioaccumulation (BCF < 500)

## 12.4 Mobility in soil:

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### Mobility soil (log Koc)

Parameter	Method	Value	Value determination
log Koc		2-66	Calculated value

### Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
		25 °C		Experimental value

Volatile organic compounds (VOC)	100 %
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## 12.5 Results of PBT and vPvB assessment:

Substance does not meet the screening criteria for persistency nor bioaccumulation so is neither PBT nor vPvB.

## 12.6 Other adverse effects:

ethylene, liquefied, under pressure

### Global warming potential (GWP)

No data available

### Ozone-depleting potential (ODP)

Ozone layer	Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009)
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## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1 Waste treatment methods:

#### 13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, decision 2001/118/EC).

16 05 04\* (gases in pressure containers (including halons) containing dangerous substances). Hazardous waste according to Directive 2008/98/EC.

#### 13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

#### 13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

## SECTION 14: Transport information

### Road (ADR)

#### 14.1 UN number:

UN number	1962
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#### 14.2 UN proper shipping name:

Proper shipping name	Ethylene
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#### 14.3 Transport hazard class(es):

Reason for revision:

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Hazard identification number	23
Class	2
Classification code	2F

#### 14.4 Packing group:

Packing group	
Labels	2.1

#### 14.5 Environmental hazards:

Environmentally hazardous substance mark	no
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#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	none.

### Rail (RID)

#### 14.1 UN number:

UN number	1962
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#### 14.2 UN proper shipping name:

Proper shipping name	Ethylene
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#### 14.3 Transport hazard class(es):

Hazard identification number	23
Class	2
Classification code	2F

#### 14.4 Packing group:

Packing group	
Labels	2.1 (+ 13)

#### 14.5 Environmental hazards:

Environmentally hazardous substance mark	no
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#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	none.

### Inland waterways (ADN)

#### 14.1 UN number:

UN number	1962
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#### 14.2 UN proper shipping name:

Proper shipping name	Ethylene
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#### 14.3 Transport hazard class(es):

Class	2
Classification code	2F

#### 14.4 Packing group:

Packing group	
Labels	2.1

#### 14.5 Environmental hazards:

Environmentally hazardous substance mark	no
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#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	none.

### Sea (IMDG)

#### 14.1 UN number:

UN number	1962
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#### 14.2 UN proper shipping name:

Proper shipping name	Ethylene
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#### 14.3 Transport hazard class(es):

Class	2.1
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#### 14.4 Packing group:

Labels	2.1
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#### 14.5 Environmental hazards:

Marine pollutant	-
Environmentally hazardous substance mark	no

#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Annex II of MARPOL 73/78	
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## Air (ICAO-TI/IATA-DGR)

14.1 UN number:

UN number	1962
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14.2 UN proper shipping name:

Proper shipping name	Ethylene
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14.3 Transport hazard class(es):

Class	2.1
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14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
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14.6 Special precautions for user:

Special provisions	A1
Cargo transport: maximum net quantity per packaging	150 kg
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	Forbidden

## SECTION 15: Regulatory information

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

#### European legislation:

REACH Annex XVII - Restriction

Enumerated in Annex XVII of Regulation (EC) No. 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

#### National legislation

- The Netherlands

Waterbezwaarlijkheid (for NL)	8
Waste identification other lists of waste materials	LWCA (the Netherlands): KGA category 06

- Germany

WGK	-	Classification non-water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 1)
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### 15.2 Chemical safety assessment:

No chemical safety assessment has been conducted.

## SECTION 16: Other information

### Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labelling in accordance with 29th adaptation of EC directive 67/548/EEC

Labels



F+

#### R-phrases

- 12 Extremely flammable
- 67 Vapours may cause drowsiness and dizziness

#### S-phrases

- (02) (Keep out of the reach of children)
- 09 Keep container in a well-ventilated place
- 16 Keep away from sources of ignition - No smoking
- 33 Take precautionary measures against static discharges
- (46) (If swallowed, seek medical advice immediately and show this container or label)

#### Full text of any R-phrases referred to under headings 2 and 3:

- R12 Extremely flammable
- R67 Vapours may cause drowsiness and dizziness

#### Full text of any H-statements referred to under headings 2 and 3:

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.

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H336 May cause drowsiness or dizziness.

(\*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult your BIG licence agreement for details.

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