

## ethene, liquefied, under pressure

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

## 1.1 Product identifier:

Product name	: ethene, liquefied, under pressure
Synonyms	: 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; ethene; etherin, liquefied, under pressure; ethylene; ethylene, liquefied, under pressure; ethylene, pure; heavy carburetted hydrogen, liquefied, under pressure; olefiant gas, liquefied, under pressure; R1150, liquefied, under pressure
Registration number REACH	: 01-2119462827-27
Product type REACH	: Substance/mono-constituent
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	: C2H4

## 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 safety data sheet

CHEM OGAS NV  
Westv aardijk 85  
B-1850 Grimbergen Belgium  
☎ +32 2 251 60 87  
☎ +32 2 252 17 51  
info@chemogas.com

## Distributor of the product

CHEM OGAS NV  
Westv aardijk 85  
B-1850 Grimbergen Belgium  
☎ +32 2 251 60 87  
☎ +32 2 252 17 51  
info@chemogas.com

## 1.4 Emergency telephone number:

24h/24h (Telephone advice: English, French, German, Dutch):  
+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 statements
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

F+; R12 - Extremely flammable.

R67 - Vapours may cause drowsiness and dizziness.

## 2.2 Label elements:

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



**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, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe gas.  
P271 Use only outdoors or in a well-ventilated area.  
P304 + P340 IF INHALED: Remove person to fresh air and keep 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**

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. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
ethylene 01-2119462827-27	74-85-1 200-815-3	C>99 %	F+; R12 R67	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280 STOT SE 3; H336	(1)(2)(10)	Mono-constituent

(1) For R-phrases and H-statements in full: see heading 16  
(2) Substance with a Community workplace exposure limit  
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

### 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:**

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.

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## 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:

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

#### 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:

Insulating gloves. Protective clothing. Compressed air/oxygen apparatus.

## 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.

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:

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:

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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. Observe normal hygiene standards.

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

### 7.2.1 Safe storage requirements:

Storage temperature: < 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. Provide for a tub to collect spills. Provide the tank with earthing. Under a shelter/in the open. Detached building. Meet the legal requirements.

### 7.2.2 Keep away from:

Heat sources, ignition sources, 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.

##### The Netherlands

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

##### Belgium

Ethylène	Time-weighted average exposure limit 8 h	200 ppm (A)	La mention "A" signifie que l'agent libère un gaz ou une vapeur qui n'ont en eux-mêmes aucun effet physiologique mais peuvent diminuer le taux d'oxygène dans l'air. Lorsque le taux d'oxygène descend en dessous de 17-18 % (vol/vol) le manque d'oxygène provoque des suffocations qu'aucun symptôme préalable n'annonce
	Time-weighted average exposure limit 8 h	233 mg/m <sup>3</sup> (A)	La mention "A" signifie que l'agent libère un gaz ou une vapeur qui n'ont en eux-mêmes aucun effet physiologique mais peuvent diminuer le taux d'oxygène dans l'air. Lorsque le taux d'oxygène descend en dessous de 17-18 % (vol/vol) le manque d'oxygène provoque des suffocations qu'aucun symptôme préalable n'annonce

##### USA (TLV-ACGIH)

Ethylene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm	
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##### 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

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. High vapour/gas concentration: self-contained respirator.

### b) Hand protection:

Insulated gloves.

- materials (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	Liquefied 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 ; Test data
Dynamic viscosity	0.01 mPa.s ; 27 °C
Kinematic viscosity	No data available
Melting point	-169 °C
Boiling point	-104 °C
Flash point	Not applicable (gas)
Evaporation rate	No data available
Relative vapour density	0.98
Vapour pressure	41000 hPa ; 0 °C 2124 hPa ; -90 °C
Solubility	water ; 0.13 g/100 ml ; 25 °C ether ; soluble
Relative density	0.60 ; -104 °C
Decomposition temperature	315 °C
Auto-ignition temperature	450 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

### 9.2 Other information:

Minimum ignition energy	0.070 mJ
Specific conductivity	< 10000 pS/m
Critical temperature	10 °C
Critical pressure	51200 hPa
Surface tension	0.016 N/m ; -104 °C
Absolute density	600 kg/m <sup>3</sup> ; -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.

### 10.2 Chemical stability:

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions:

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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

##### ethene, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral						Data waiving	
Dermal						Data waiving	
Inhalation (gases)	LC50		>57000 ppm	4 h	Rat (male)	Experimental value	
Inhalation (gases)	LC50		>65.4 mg/l	4 h	Rat (male)	Experimental value	

As the substance is a gas, inhalation is the most appropriate route of exposure

#### Conclusion

Low acute toxicity by the inhalation route

#### Corrosion/irritation

##### ethene, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Skin						Data waiving	

The liquid form can cause frostbites, typical for all liquified gases

#### Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

#### Respiratory or skin sensitisation

##### ethene, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin						Data waiving	
Inhalation						Data waiving	

The study on skin sensitisation does not need to be conducted as the substance is a gas

#### Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

#### Specific target organ toxicity

##### ethene, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (gases)	NOAEC systemic effects	OECD 413	10000 ppm		No adverse systemic effects	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (gases)	LOAEC	OECD 413	300 ppm	Nose	Erosion/degeneration nasal epithelia	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (gases)		Human observation		Central nervous system	Narcosis		Human	Experimental value

As the substance is a gas, inhalation is the most appropriate route of exposure

#### Conclusion

May cause drowsiness or dizziness.

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Not classified for subchronic toxicity

## Mutagenicity (in vitro)

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Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

## Mutagenicity (in vivo)

ethene, liquefied, under pressure

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474	4 weeks (6h/day, 5 days/week)	Rat (male)	Bone marrow	Experimental value
Negative	EPA OTS 798.5395	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Bone marrow	Experimental value

## Carcinogenicity

ethene, liquefied, under pressure

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

## Reproductive toxicity

ethene, liquefied, under pressure

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

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No (test) data available

## Chronic effects from short and long-term exposure

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No effects known.

## SECTION 12: Ecological information

### 12.1 Toxicity:

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	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

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Harmful to fishes  
Harmful to invertebrates (Daphnia)  
Harmful to algae  
Toxic to flora  
Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

## 12.2 Persistence and degradability:

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### Phototransformation air (DT50 air)

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

### Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
			Not applicable (gas)

### Conclusion

Readily biodegradable 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	Remark	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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### (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

### Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

## 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:

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### Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006)

### Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

## 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 2000/0532/EC).

16 05 04\* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing dangerous substances).

Depending on branch of industry and production process, also other waste codes may be applicable. 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.

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## 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):

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/IMSBC)

#### 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

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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	none.

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

Annex II of MARPOL 73/78	Not applicable
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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
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

## SECTION 15: Regulatory information

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

#### European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
100 %	

Plant protection products

Included in implementing Regulation (EU) No 540/2011, annex part A

European drinking water standards (Directive 98/83/EC)

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Parameter	Parametric value	Note	Reference
Pesticides	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.
Pesticides — Total	0,5 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Subject to restrictions of 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.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
ethylene	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 that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — “whoopee” cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs.2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: “For professional users only”.3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

#### National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	9

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# ethene, liquefied, under pressure

## National legislation Germany

TRGS905 - Krebserzeugend	-
TRGS905 - Erbgutverändernd	3
TRGS905 - Fruchtbarkeitsgefährdend	-
MAK - Krebserzeugend Kategorie	3B
WGK	nwg; Classification non-water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 1)
TA-Luft	5.2.5; I 5.2.5

## National legislation France

No data available

## National legislation Belgium

No data available

## Other relevant data

IARC - classification	3; Ethylene
TLV - Carcinogen	Ethylene; A4

## 15.2 Chemical safety assessment:

A chemical safety assessment has been performed.

## SECTION 16: Other information

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

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

#### Labels



Extremely flammable

#### 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.  
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 and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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