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Revision date : 2023-01-21 Supersedes version of : 2021-06-23

NOAL\_0105

Country : NO / Language : EN

## **Propylene**

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

### 1.1. Product identifier

Trade name : Propylene, Flamal 29 SDS no : NOAL\_0105 Other means of identification : Propylene

CAS-No. : 115-07-1 EC-No. : 204-062-1 EC Index-No. : 601-011-00-9

REACH registration No : 01-2119447103-50

Chemical formula : C3H6

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

Relevant identified uses : Industrial and professional uses. Perform risk assessment prior to use.

Test gas/Calibration gas.

Laboratory use.

Chemical reaction / Synthesis.

Polymer production.

Contact supplier for more information on uses.

Uses advised against : Consumer use.

Uses other than those listed above are not supported, contact your supplier for more

information on other uses.

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

### **Company identification**

## Supplier

AIR LIQUIDE NORWAY AS Drammensveien 64 B 3050 Mjøndalen - NORWAY T + 47 32 27 41 40 info.norway@airliquide.com

E-Mail address (competent person) : eunordic-sds@airliquide.com

## 1.4. Emergency telephone number

Emergency telephone number : 112 / Giftinformasjon: + 47 22 59 13 00

Availability (24 / 7)

### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

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

Physical hazards Flammable gases, Category 1A H220

Gases under pressure : Liquefied gas H280



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#### 2.2. Label elements

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

Hazard pictograms (CLP)





GHS02

02 GHS

Signal word (CLP) : Danger

Hazard statements (CLP) : H220 - Extremely flammable gas.

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

Precautionary statements (CLP)

- Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

- Response : P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - In case of leakage, eliminate all ignition sources. P381 - In case of leakage, eliminate all ignition sources.

- Storage : P403 - Store in a well-ventilated place.

P410+P403 - Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

Contact with liquid may cause cold burns/frostbite.

Not classified as PBT or vPvB.

The substance/mixture has no endocrine disrupting properties.

## **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Name	Product identifier	Composition [V-%]:	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Propylene	CAS-No.: 115-07-1 EC-No.: 204-062-1 EC Index-No.: 601-011-00-9 REACH registration No: 01-2119447103-		Flam. Gas 1A, H220 Press. Gas (Liq.), H280

Contains no other components or impurities which will influence the classification of the product.

3.2. Mixtures Not established.

## **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

- Inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep

victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing

stopped.

- Skin contact : In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain

medical assistance.

- Eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes.

- Ingestion : Ingestion is not considered a potential route of exposure.

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

In low concentrations may cause narcotic effects. Symptoms may include dizziness,

headache, nausea and loss of co-ordination.

See section 11.

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

None

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray or fog.

Dry powder.

- Unsuitable extinguishing media : Carbon dioxide.

Do not use water jet to extinguish.

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

Specific hazards : Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products : Carbon monoxide.

5.3. Advice for firefighters

Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat

radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering

sewers and drainage systems.

If possible, stop flow of product.

Use water spray or fog to knock down fire fumes if possible.

Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive

re-ignition may occur. Extinguish any other fire.

Move containers away from the fire area if this can be done without risk.

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus.

Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire

fighters.

Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full

face mask.

Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves

for firefighters.

### **SECTION 6: Accidental release measures**

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

For non-emergency personnel : Act in accordance with local emergency plan.

Prevent from entering sewers, basements and workpits, or any place where its

accumulation can be dangerous.

Stay upwind.

See section 8 of the SDS for more information on personal protective equipment

For emergency responders : See section 5.3 of the SDS for more information.

6.2. Environmental precautions

Try to stop release.

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

Keep area evacuated and free from ignition sources until any spilled liquid has evaporated

(ground free from frost).



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6.4. Reference to other sections

See also sections 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Safe use of the product

: Do not breathe gas.

Avoid release of product into atmosphere.

The product must be handled in accordance with good industrial hygiene and safety

Only experienced and properly instructed persons should handle gases under pressure.

Consider pressure relief device(s) in gas installations.

Ensure the complete gas system was (or is regularily) checked for leaks before use.

Do not smoke while handling product.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Avoid suck back of water, acid and alkalis.

Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.

Purge air from system before introducing gas.

Take precautionary measures against static discharge.

Keep away from ignition sources (including static discharges).

Consider the use of only non-sparking tools.

Ensure equipment is adequately earthed.

Refer to supplier's container handling instructions.

Do not allow backfeed into the container.

Protect containers from physical damage; do not drag, roll, slide or drop.

When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.

Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.

If user experiences any difficulty operating valve discontinue use and contact supplier.

Never attempt to repair or modify container valves or safety relief devices.

Damaged valves should be reported immediately to the supplier.

Keep container valve outlets clean and free from contaminants particularly oil and water.

Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.

Close container valve after each use and when empty, even if still connected to equipment.

Never attempt to transfer gases from one cylinder/container to another.

Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the content

Suck back of water into the container must be prevented.

Open valve slowly to avoid pressure shock.

of the container.

Safe handling of the gas receptacle



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

Observe all regulations and local requirements regarding storage of containers.

Containers should not be stored in conditions likely to encourage corrosion.

Container valve guards or caps should be in place.

Containers should be stored in the vertical position and properly secured to prevent them from falling over

Stored containers should be periodically checked for general condition and leakage.

Keep container below 50°C in a well ventilated place.

Store containers in location free from fire risk and away from sources of heat and ignition.

Keep away from combustible materials.

Segregate from oxidant gases and other oxidants in store.

All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

### 7.3. Specific end use(s)

None.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

Propylene (115-07-1)		
Belgium - Occupational Exposure Limits		
Local name	Propylène # Propeen	
Remark	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 diminuerm.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. # De vermelding A betekent dat dit agens gas of damp vrijgeeft dat of die op zich geen fysiologische werking heeft, maar het zuurstofgehalte in de lucht verlaagt. Wanneer het zuurstofgehalte daalt onder de 17-18 % (vol/vol), veroorzaakt het zuurstoftekort verstikking, die zich manifesteert zonder dat er een waarschuwing aan voorafgaat.	
Denmark - Occupational Exposure Limits		
Local name	Propen (Propylen)	
OEL TWA [1]	172 mg/m³	
OEL TWA [2]	100 ppm	
Finland - Occupational Exposure Limits		
Local name	Propyleeni	
HTP (OEL TWA) [2]	500 ppm	
Ireland - Occupational Exposure Limits		
Local name	Propylene	
OEL TWA [2]	500 ppm	
Latvia - Occupational Exposure Limits		
Local name	Propilēns(propēns)	
OEL TWA	100 mg/m³	



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Lithuania - Occupational Exposure Limits	
Local name	Propenas (propilenas)
IPRV (OEL TWA)	900 mg/m³
IPRV (OEL TWA) [ppm]	500 ppm
Poland - Occupational Exposure Limits	
Local name	Propen
NDS (OEL TWA)	2000 mg/m³
NDSCh (OEL STEL)	8600 mg/m³
Portugal - Occupational Exposure Limits	
Local name	Propileno
OEL TWA [ppm]	500 ppm
Spain - Occupational Exposure Limits	
Local name	Propileno
VLA-ED (OEL TWA) [2]	500 ppm
Sweden - Occupational Exposure Limits	
Local name	Propen
NGV (OEL TWA)	900 mg/m³
NGV (OEL TWA) [ppm]	500 ppm
Switzerland - Occupational Exposure Limits	
Local name	Propen
MAK (OEL TWA) [1]	17500 mg/m³
MAK (OEL TWA) [2]	10000 ppm
Remark	Asphyxie, OAW
USA - ACGIH - Occupational Exposure Limits	
Local name	Propylene
ACGIH OEL TWA [ppm]	500 ppm
Remark (ACGIH)	Asphyxia; URT irr

Propylene (115-07-1)	
Belgium - Occupational Exposure Limits	
Local name	Propylène # Propeen



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## Propylene NOAL\_0105

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Remark Re		Country : NO / Language : EN	
Decar   Proper   Pr	Remark	eux-mêmes aucun effet physiologique mais peuvent diminuerm.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. # De vermelding A betekent dat dit agens gas of damp vrijgeeft dat of die op zich geen fysiologische werking heeft, maar het zuurstofgehalte in de lucht verlaagt. Wanneer het zuurstofgehalte daalt onder de 17-18 % (vol/vol), veroorzaakt het zuurstoftekort verstikking,	
OEL TWA [1]         172 mg/m²           OEL TWA [2]         100 ppm           Finland - Occupational Exposure Limits           Local name         Propyleeni           HTP (OEL TWA) [2]         500 ppm           Ireland - Occupational Exposure Limits           Local name         Propylene           OEL TWA [2]         500 ppm           Latvia - Occupational Exposure Limits         Local name           OEL TWA         100 mg/m²           Lithuania - Occupational Exposure Limits         Lithuania - Occupational Exposure Limits           Local name         Propenas (propilenas)           IPRV (OEL TWA)         900 mg/m²           IPRV (OEL TWA) [ppm]         500 ppm           Poland - Occupational Exposure Limits         Local name           NDS (OEL TWA)         2000 mg/m²           NDS (OEL TWA)         2000 mg/m²           NDS (OEL STEL)         8600 mg/m²           Portugal - Occupational Exposure Limits         Local name           OEL TWA (ppm)         500 ppm           Spain - Occupational Exposure Limits         Fropileno           OEL TWA (pol) (2)         500 ppm           Spain - Occupational Exposure Limits         Fropileno           Occupational Exposure Limits         Fropi	Denmark - Occupational Exposure Limits	,	
OEL TWA [2]         100 ppm           Finland - Occupational Exposure Limits           Local name         Propyleni           HTP (OEL TWA) [2]         500 ppm           Ireland - Occupational Exposure Limits           Local name         Propylene           OEL TWA [2]         500 ppm           Latvia - Occupational Exposure Limits           Local name         Propiléns(propēns)           OEL TWA         100 mg/m³           Lithuania - Occupational Exposure Limits         Propenas (propilenas)           Local name         Propenas (propilenas)           IPRV (OEL TWA)         900 mg/m³           1PRV (OEL TWA) (ppm]         500 ppm           Poland - Occupational Exposure Limits           Local name         Propen           NDS (OEL STEL)         8600 mg/m³           Portugal - Occupational Exposure Limits         8600 mg/m³           Local name         Propileno           OEL TWA (ppm]         500 ppm           Spain - Occupational Exposure Limits         500 ppm	Local name	Propen (Propylen)	
Propyleni	OEL TWA [1]	172 mg/m³	
Local name         Propyleeni           HTP (OEL TWA) [2]         500 ppm           Ireland - Occupational Exposure Limits         Propylene           OEL TWA [2]         500 ppm           Latvia - Occupational Exposure Limits         Propiléns (propéns)           Local name         Propiléns (propéns)           OEL TWA         100 mg/m³           Lithuania - Occupational Exposure Limits         Propenas (propilenas)           Lical name         Propenas (propilenas)           IPRV (OEL TWA)         900 mg/m³           1PRV (OEL TWA) (ppm)         900 ppm           Poland - Occupational Exposure Limits         Propen           Local name         Propen           NDS (OEL TWA)         2000 mg/m³           NDS (OEL STEL)         8600 mg/m³           Portugal - Occupational Exposure Limits         Propileno           Local name         Propileno           OEL TWA (ppm)         500 ppm           Spain - Occupational Exposure Limits         Propileno           Local name         Propileno           Spain - Occupational Exposure Limits         Propileno           Sudden - Occupational Exposure Limits         Propileno	OEL TWA [2]	100 ppm	
HTP (OEL TWA) [2]         500 ppm           Ireland - Occupational Exposure Limits         Propylene           OEL TWA [2]         500 ppm           Latvia - Occupational Exposure Limits         Propiëns(propëns)           OEL TWA         100 mg/m²           Lithuania - Occupational Exposure Limits         Local name         Propenas (propilenas)           IPRV (OEL TWA)         900 mg/m²           IPRV (OEL TWA) [ppm]         500 ppm           Poland - Occupational Exposure Limits         Local name         Propen           NDS (OEL TWA)         2000 mg/m³           NDS (OEL STEL)         8600 mg/m³           Portugal - Occupational Exposure Limits         Local name         Propileno           OEL TWA [ppm]         500 ppm           Spain - Occupational Exposure Limits         Local name         Propileno           VIA-ED (OEL TWA) [2]         500 ppm           Sweden - Occupational Exposure Limits         Local name         Propileno           Spain - Occupational Exposure Limits         Local name         Propileno           Spain - Occupational Exposure Limits         Local name         Propileno	Finland - Occupational Exposure Limits	'	
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Latvia - Occupational Exposure Limits  Local name Propilens(propēns)  OEL TWA 100 mg/m³  Lithuania - Occupational Exposure Limits  Local name Propenas (propilenas)  IPRV (OEL TWA) 900 mg/m³  IPRV (OEL TWA) [ppm] 500 ppm  Poland - Occupational Exposure Limits  Local name Propen  NDS (OEL TWA) 2000 mg/m³  NDS (OEL TWA) 2000 mg/m³  NDSCh (OEL STEL) 8600 mg/m³  Portugal - Occupational Exposure Limits  Local name Propileno  OEL TWA (ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno  Spain - Occupational Exposure Limits	Local name	Propylene	
Local name  OEL TWA  100 mg/m³  Lithuania - Occupational Exposure Limits  Local name  Propenas (propilenas)  IPRV (OEL TWA)  IPRV (OEL TWA) [ppm]  Poland - Occupational Exposure Limits  Local name  Propen  Poland - Occupational Exposure Limits  Local name  Propen  NDS (OEL TWA)  2000 mg/m³  NDS (OEL TWA)  8600 mg/m³  Portugal - Occupational Exposure Limits  Local name  Propileno  OEL TWA [ppm]  Propileno  OEL TWA [ppm]  Spain - Occupational Exposure Limits  Local name  Propileno  VLA-ED (OEL TWA) [2]  Sweden - Occupational Exposure Limits	OEL TWA [2]	500 ppm	
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IPRV (OEL TWA) [ppm] 900 mg/m³  IPRV (OEL TWA) [ppm] 500 ppm  Poland - Occupational Exposure Limits  Local name Propen  NDS (OEL TWA) 2000 mg/m³  NDSCh (OEL STEL) 8600 mg/m³  Portugal - Occupational Exposure Limits  Local name Propileno  OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno  Spain - Occupational Exposure Limits  Local name Propileno  Spain - Occupational Exposure Limits  Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	Lithuania - Occupational Exposure Limits		
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Poland - Occupational Exposure Limits  Local name Propen  NDS (OEL TWA) 2000 mg/m³  NDSCh (OEL STEL) 8600 mg/m³  Portugal - Occupational Exposure Limits  Local name Propileno  OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	IPRV (OEL TWA)	900 mg/m³	
Local name Propen  NDS (OEL TWA) 2000 mg/m³  NDSCh (OEL STEL) 8600 mg/m³  Portugal - Occupational Exposure Limits  Local name Propileno  OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	IPRV (OEL TWA) [ppm]	500 ppm	
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Portugal - Occupational Exposure Limits  Local name Propileno OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	NDS (OEL TWA)	2000 mg/m³	
Local name Propileno OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	NDSCh (OEL STEL)	8600 mg/m³	
OEL TWA [ppm] 500 ppm  Spain - Occupational Exposure Limits  Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	Portugal - Occupational Exposure Limits		
Spain - Occupational Exposure Limits  Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	Local name	Propileno	
Local name Propileno  VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	OEL TWA [ppm]	500 ppm	
VLA-ED (OEL TWA) [2] 500 ppm  Sweden - Occupational Exposure Limits	Spain - Occupational Exposure Limits		
Sweden - Occupational Exposure Limits	Local name	Propileno	
	VLA-ED (OEL TWA) [2]	500 ppm	
Local name Propen	Sweden - Occupational Exposure Limits		
	Local name	Propen	



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NGV (OEL TWA)	900 mg/m³	
NGV (OEL TWA) [ppm]	500 ppm	
Switzerland - Occupational Exposure Limits		
Local name	Propen	
MAK (OEL TWA) [1]	17500 mg/m³	
MAK (OEL TWA) [2]	10000 ppm	
Remark	Asphyxie, OAW	
USA - ACGIH - Occupational Exposure Limits		
Local name	Propylene	
ACGIH OEL TWA [ppm]	500 ppm	
Remark (ACGIH)	Asphyxia; URT irr	

Propylene (115-07-1)	
DNEL: Derived no effect level (Workers)	
Acute - local effects, inhalation	860 mg/m³
Acute - systemic effects, inhalation	860 mg/m³

Propylene (115-07-1)	
DNEL: Derived no effect level (Workers)	
Acute - local effects, inhalation	860 mg/m³
Acute - systemic effects, inhalation	860 mg/m³

Propylene (115-07-1)	
PNEC: Predicted no effect concentration	
Aqua (freshwater)	1.38 mg/l
Aqua (marine water)	1.38 mg/l

Propylene (115-07-1)	
PNEC: Predicted no effect concentration	
Aqua (freshwater)	1.38 mg/l
Aqua (marine water)	1.38 mg/l

## 8.2. Exposure controls

## 8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Product to be handled in a closed system.

Systems under pressure should be regularily checked for leakages.

Ensure exposure is below occupational exposure limits (where available).

Gas detectors should be used when flammable gases/vapours may be released.

Consider the use of a work permit system e.g. for maintenance activities.



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#### 8.2.2. Individual protection measures, e.g. personal protective equipment

A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.

The following recommendations should be considered:

PPE compliant to the recommended EN/ISO standards should be selected.

Wear goggles when transfilling or breaking transfer connections. Standard EN 166 - Personal eye-protection - specifications.

Skin protection

· Eye/face protection

- Hand protection : Wear working gloves when handling gas containers.

Standard EN 388 - Protective gloves against mechanical risk, performance level 1 or higher.

Wear cold insulating gloves when transfilling or breaking transfer connections.

Standard EN 511 - Cold insulating gloves.

- Other : Consider the use of flame resistant anti-static safety clothing.

Standard EN ISO 14116 - Limited flame spread materials.

Standard EN 1149-5 - Protective clothing: Electrostatic properties.

Wear safety shoes while handling containers.

Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

Respiratory protection
 Gas filters may be used if all surrounding conditions e.g. type and concentration of the

contaminant(s) and duration of use are known.

Use gas filters with full face mask, where exposure limits may be exceeded for a short-term

period, e.g. connecting or disconnecting containers.

Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full

face mask.

Recommended: Filter AX (brown).

Gas filters do not protect against oxygen deficiency.

Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks . Self contained breathing apparatus is recommended, where unknown exposure may be

expected, e.g. during maintenance activities on installation systems.

• Thermal hazards : None in addition to the above sections.

## 8.2.3. Environmental exposure controls

Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Appearance

Melting point / Freezing point

- Physical state at 20°C / 101.3kPa : Gas - Colour : Colourless.

Odour : Stenchant often added. Sweetish. Poor warning properties at low concentrations.

Odour threshold is subjective and inadequate to warn of overexposure.

pH : Not applicable for gases and gas mixtures.

: -185 °C -185 °C

Boiling point : -47.7 °C

Flash point : Not applicable for gases and gas mixtures.

Flammability : Extremely flammable gas

Explosive limits : 1.8 – 11.2 vol %

Lower explosion limit : Not available

Upper explosion limit : Not available

Vapour pressure [20°C] : 10.2 bar(a)

Vapour pressure [50°C] : 20.5 bar(a)

Density : Not applicable

Vapour density : Not applicable for gases and gas mixtures.

Relative density, liquid (water=1) : 0.6
Relative density, gas (air=1) : 1.5



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Water solubility : 384 mg/l
Partition coefficient n-octanol/water (Log Kow) : 1.77
Auto-ignition temperature : 485 °C
Decomposition temperature : Not applicable.

Viscosity, kinematic : No reliable data available.

Particle characteristics : Not applicable for gases and gas mixtures.

#### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Explosive properties : Not applicable.

Oxidising properties : Not applicable.

Tci : 4.2 %

Critical temperature [°C] : 92.4 °C

9.2.2. Other safety characteristics

Molar mass : 42 g/mol

Evaporation rate : Not applicable for gases and gas mixtures.

Gas group : Press. Gas (Liq.)

Other data : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below

ground level.

## SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

#### 10.2. Chemical stability

May polymerise.

#### 10.3. Possibility of hazardous reactions

None.

Can form explosive mixture with air. May react violently with oxidants.

Reactivity : This mixture contains components with the following reactivity : Can form explosive mixture

with air. May react violently with oxidants.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Avoid moisture in installation systems.

10.5. Incompatible materials

Air, Oxidisers.

For additional information on compatibility refer to ISO 11114.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not

be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity: No toxicological effects from this product.Skin corrosion/irritation: No known effects from this product.Serious eye damage/irritation: No known effects from this product.

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: No known effects from this product.

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Respiratory or skin sensitisation : No known effects from this product.

Germ cell mutagenicity : No known effects from this product.

Carcinogenicity : No known effects from this product.

Toxic for reproduction : Fertility : No known effects from this product.

Toxic for reproduction : unborn child : No known effects from this product.

STOT-single exposure : No known effects from this product.

Aspiration hazard : Not applicable for gases and gas mixtures.

11.2. Information on other hazards

STOT-repeated exposure

Other information : The substance/mixture has no endocrine disrupting properties.

: 51.7 mg/l

## **SECTION 12: Ecological information**

#### 12.1. Toxicity

LC50 96 h - Fish [mg/l]

Assessment : Classification criteria are not met.

 EC50 48h - Daphnia magna [mg/l]
 : 28.2 mg/l

 EC50 72h - Algae [mg/l]
 : No data available.

 EC50 96h Algae [mg/l]
 : 12.1 mg/l

Propylene (115-07-1)	
EC50 48h - Daphnia magna [mg/l]	28.2 mg/l
EC50 72h - Algae [mg/l]	No data available.
EC50 96h Algae [mg/l]	12.1 mg/l
LC50 96 h - Fish [mg/l]	51.7 mg/l

### 12.2. Persistence and degradability

Assessment : The substance is readily biodegradable. Unlikely to persist.

12.3. Bioaccumulative potential

Assessment : Not expected to bioaccumulate due to the low log Kow (log Kow < 4).

See section 9.

12.4. Mobility in soil

Assessment : Because of its high volatility, the product is unlikely to cause ground or water pollution.

Partition into soil is unlikely.

12.5. Results of PBT and vPvB assessment

Assessment : Not classified as PBT or vPvB.

12.6. Endocrine disrupting properties

The substance/mixture has no endocrine disrupting properties.

12.7. Other adverse effects

Other adverse effects : No known effects from this product.

Effect on the ozone layer : None.

Effect on global warming : No known effects from this product.

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## **Propylene**

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### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Contact supplier if guidance is required.

Do not discharge into areas where there is a risk of forming an explosive mixture with air.

Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not

Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at

http://www.eiga.org for more guidance on suitable disposal methods.

Return unused product in original container to supplier.

List of hazardous waste codes (from Commission

Decision 2000/532/EC as amended)

16 05 04 \*: Gases in pressure containers (including halons) containing hazardous

substances

#### 13.2. Additional information

External treatment and disposal of waste should comply with applicable local and/or national regulations.

## **SECTION 14: Transport information**

#### 14.1. UN number or ID number

In accordance with ADR / RID / IMDG / IATA / ADN

UN-No. : 1077

14.2. UN proper shipping name

: PROPYLENE Transport by road/rail (ADR/RID) Propylene Transport by air (ICAO-TI / IATA-DGR) : PROPYLENE Transport by sea (IMDG)

## 14.3. Transport hazard class(es)

Labelling



2.1: Flammable gases.

#### Transport by road/rail (ADR/RID)

2 Class Classification code 2F Hazard identification number 23

Tunnel Restriction : B/D - Tank carriage: Passage forbidden through tunnels of category B, C, D and E. Other

carriage: Passage forbidden through tunnels of category D and E

Transport by air (ICAO-TI / IATA-DGR)

Class / Div. (Sub. risk(s)) : 2.1

Transport by sea (IMDG)

Class / Div. (Sub. risk(s)) : 2.1 : F-D Emergency Schedule (EmS) - Fire Emergency Schedule (EmS) - Spillage : S-U

14.4. Packing group

: Not established. Transport by road/rail (ADR/RID) Transport by air (ICAO-TI / IATA-DGR) Not established. Transport by sea (IMDG) Not established.



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#### 14.5. Environmental hazards

Transport by road/rail (ADR/RID) : None. Transport by air (ICAO-TI / IATA-DGR) : None. Transport by sea (IMDG) : None.

#### 14.6. Special precautions for user

Packing Instruction(s)

Transport by road/rail (ADR/RID) : P200

Transport by air (ICAO-TI / IATA-DGR)

Passenger and Cargo Aircraft : Forbidden. Cargo Aircraft only : 200. Transport by sea (IMDG) : P200

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's

compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in

the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure valve is closed and not leaking.

- Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

#### 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

#### **EU-Regulations**

Restrictions on use · None

National legislation : Ensure all national/local regulations are observed.

Seveso Directive: 2012/18/EU (Seveso III) : Listed.

Covered.

#### National regulations

Ensure all national/local regulations are observed.

Germany

Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Classification according to AwSV)

National Rules and Recommendations : [German regulations] BetriebssicherheitsV mit TRBSen insbesondere TRBS 3145 / TRGS

725 Ortsbewegliche Druckgasbehälter", TRBS 2141, BGRegel 500 Teil 2.33: "Umgang mit Gasen", GefahrstoffV mit Technischen Regeln Gefährliche Stoffe TRGS insbesondere TRGS 407 "Tätigkeiten mit Gasen - Gefährdungsbeurteilung", TRGS 400, 500, 510, 900."

BGR 104, TRBS 2152.

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed SZW-lijst van mutagene stoffen The substance is not listed SZW-lijst van reprotoxische stoffen - Borstvoeding The substance is not listed SZW-lijst van reprotoxische stoffen -: The substance is not listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling : The substance is not listed

Denmark

**Danish National Regulations** : Young people below the age of 18 years are not allowed to use the product

**Switzerland** 

Storage class (LK) : LK 2 - Liquefied or pressurized gases

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## **Propylene**

15.2. Chemical safety assessment

A CSA has been carried out

## **SECTION 16: Other information**

Indication of changes : Safety data sheet in accordance with commission regulation (EU) No 2020/878.

Abbreviations and acronyms : ATE - Acute Toxicity Estimate

> CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation

(EC) No 1907/2006

EINECS - European Inventory of Existing Commercial Chemical Substances

CAS# - Chemical Abstract Service number PPE - Personal Protection Equipment

LC50 - Lethal Concentration to 50 % of a test population

RMM - Risk Management Measures

PBT - Persistent, Bioaccumulative and Toxic vPvB - Very Persistent and Very Bioaccumulative

STOT- SE: Specific Target Organ Toxicity - Single Exposure

CSA - Chemical Safety Assessment

EN - European Standard **UN - United Nations** 

ADR - European Agreement concerning the International Carriage of Dangerous Goods by

Road

IATA - International Air Transport Association

IMDG code - International Maritime Dangerous Goods

RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

WGK - Water Hazard Class

STOT - RE: Specific Target Organ Toxicity - Repeated Exposure

UFI: Unique Formula Identifier

Training advice : Ensure operators understand the flammability hazard. Further information

Classification in accordance with the procedures and calculation methods of Regulation

(EC) 1272/2008 (CLP).

Key literature references and sources of data are maintained in EIGA doc 169: 'Classification and Labelling Guide', downloadable at http://www.Eiga.eu .

Full text of H- and EUH-statements	
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

DISCLAIMER OF LIABILITY

: Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

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