



# Propylene

## 1. Identification of the substance/preparation and of the company/undertaking

**Trade name:** Polymer Grade Propylene / Chemical Grade Propylene  
**Intended use:** Raw material in chemical industry.  
**Manufacturer:** Borealis AB  
 S-444 86 Stenungsund, Sweden  
 Telephone: +46 303 86000  
 Emergency telephone number:  
 +46 303 87280 / +46 303 771643 Production leader, Cracker (24h)  
 +46 8 33 70 43 Chemical Emergency Service, Sweden (24h)

Borealis Polymers Oy  
 P.O.Box 330, FIN-06101 Porvoo, Finland  
 Telephone: +358 9 394900  
 Emergency telephone number:  
 +358 9 39493416 Shift supervisor, Olefins (24h)  
 +358 10 4582267 Fire department, Kilpilahti industrial area (24h)  
 +358 9 471977 & +358 9 4711 Poison Information Center, Finland (24h)

Borealis Kallo N.V.  
 Haven 1568, Sint-Jansweg 2, B-9130 Kallo-Kieldrecht, Belgium  
 Telephone: +32 3 570 5211  
 Emergency telephone number:  
 +32 3 570 5354 Shift supervisor, Dehydrogenation plant (24h)

### Single Sales Company:

Borealis Polymers N.V.  
 Industrierweg 148, 3583 Beringen, Belgium  
 Telephone: +32 11 45 90 11  
 E-mail address: SDS@borealisgroup.com

## 2. Hazards identification

**Health:** Rapid evaporation of the liquid may cause frostbite. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Inhalation of high vapour concentrations can cause central nervous system depression and narcosis.

**Fire:** F+; Extremely flammable R12; Extremely flammable.

Risk of explosion if heated under confinement. Vapours may form explosive mixtures with air. High risk of fire in case of leakage.

**Environment:** Not classified as dangerous. The product evaporates readily.

## 3. Composition/information on ingredients

Components to be indicated according to EC directives:

Components:	EC No	CAS No	Concentration (w/w %)	Classification/R-phrases)
Propene	204-062-1	115-07-1	>94,0 - <100,0	extremely flammable (F+); R12



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Propane	200-827-9	74-98-6	>0,0 - <6,0	extremely flammable (F+); R12
Propene	204-062-1	115-07-1		Occupational exposure limits
propane	200-827-9	74-98-6		Occupational exposure limits

Occupational exposure limits, see chapters 8 and 11.  
R phrases, see chapter 16.

## 4. First-aid measures

**Inhalation:** Remove from exposure. Keep warm and at rest and provide fresh air. In case of breathing difficulties, apply mouth to mouth respiration. Seek medical advice immediately.

**Skin contact:** Wash frost-bitten areas with plenty of water. Do not remove clothing. Seek medical advice.

**Eye contact:** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Ingestion:** Not probable: The product evaporates readily.

## 5. Fire-fighting measures

**Suitable extinguishing media:** Dry powder, carbon dioxide, foam and water mist.

**Special exposure hazards:** Incomplete combustion may produce: carbon monoxide

**Protective equipment for fire-fighting:** Wear self-contained breathing apparatus and protective suit.

**Fire-fighting further advice:** Attempt to stop leakage without personal risk. If conditions permit, let fire burn itself out. Cool tanks with water spray.

## 6. Accidental release measures

**Personal precautions:** Use personal protective equipment. See chapter 8.

**Environmental precautions:** Prevent product from entering environment and drains. If major spillage occurs, contact the proper local authorities.

**Methods for cleaning up:** Evaporates. Ensure adequate ventilation, especially in confined areas.

**Further Information:** Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Keep people away from and upwind of spill/leak. Attempt to stop leakage without personal risk. Keep away from sources of ignition - No smoking.

## 7. Handling and storage

**General advice:** Ensure adequate ventilation. Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Risk of explosion if heated under confinement. Vapours may form explosive mixtures with air. High risk of fire in case of leakage.

**Handling:** Refill and handle product only in closed system. Prevent leaks by checking valves, pipelines and joints regularly.

**Storage:** Keep container in a well-ventilated place. Keep product and empty container away from heat and sources of ignition. Incompatible with strong acids and oxidizing agents.

## 8. Exposure controls/personal protection

**Exposure Limits:**

Propene CAS-No.: 115-07-1



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SE_OEL	TWA	500 ppm 900 mg/m <sup>3</sup>	31.03.2003
DK_OEL	TWA	100 ppm 172 mg/m <sup>3</sup>	31.03.2003
NL_OEL	TWA	500 ppm 900 mg/m <sup>3</sup>	31.03.2005
propane CAS-No.: 74-98-6			
FI_OEL	TWA	800 ppm 1.500 mg/m <sup>3</sup>	2007
FI_OEL	STEL, 15min.	1.100 ppm 2.000 mg/m <sup>3</sup>	2007
DE_OEL	TWA	1.000 ppm 1.800 mg/m <sup>3</sup>	31.03.2005
DK_OEL	TWA	1.000 ppm 1.800 mg/m <sup>3</sup>	31.03.2003
AT_OEL	TWA	1.000 ppm 1.800 mg/m <sup>3</sup>	14.06.2004
ES_OEL	TWA	1.000 ppm	31.03.2005
PT_OEL	TWA	2.500 ppm	30.09.2004
NO_OEL	TWA	500 ppm 900 mg/m <sup>3</sup>	31.03.2003

#### Other information

**Respiratory protection:** In case of insufficient ventilation: Self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

**Hand protection:**

Cold-insulating gloves (e.g. nitrile rubber).

**Eye protection:** Safety goggles or face-shield.

**Skin and body protection:** Wear suitable protective clothing and rubber boots.

#### 9. Physical and chemical properties

**Appearance:** gaseous, compressed liquefied gas, clear

**Odour:** mild, aromatic

Boiling point/range: -48 °C

Flash point: -108 °C

Lower explosion limit: 2,4 %(V)

Relative vapour density: 1,5

Melting point/range: -185 °C

Autoignition temperature: 460 °C

Upper explosion limit: 10,3 %(V)

Vapour pressure: 11.580 hPa (25 °C)

water solubility: 0,2 g/l (20 °C)

Partition coefficient (n-octanol/water): log Pow: 1,77

#### 10. Stability and reactivity

**Conditions to avoid:** Keep away from heat and sources of ignition. Air: Observe the risk of explosion.

**Materials to avoid:** Incompatible with strong bases and oxidizing agents.

**Hazardous decomposition products:** None.

#### 11. Toxicological information



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**Acute inhalation toxicity:**

Vapours can cause suffocation by reducing oxygen available for breathing. Inhalation of high vapour concentrations can cause central nervous system depression and narcosis.

**Acute dermal toxicity:**

Rapid evaporation of the liquid may cause frostbite.

**Repeated dose toxicity:** Health injuries are not known or expected under normal use. IARC evaluation: Group 3; Unclassifiable as to carcinogenicity to humans (because of inadequate or limited evidence).

**Other information:** Absorbs into the body by inhalation.

## 12. Ecological information

**Ecotoxicity effects:** No known hazard.

**Mobility:** The product evaporates readily to air.

**Persistence and degradability:** Prone to photochemical degradation, reacting with OH radicals and ozone. Estimated atmospheric lifetime: < 1 day.

**Bioaccumulative potential:** Bioaccumulation not expected.

Partition coefficient (n-octanol/water):

log Pow = 1,77

## 13. Disposal considerations

Where possible recycling is preferred to disposal or incineration.

## 14. Transport information

Dangerous goods regulations

**Regulation ADR:**

Proper shipping name: PROPYLENE

UN: 1077      Class: 2      Label: 2.1

**Regulation IMDG:**

Proper shipping name: PROPYLENE

UN: 1077      Class: 2.1      Label: 2.1

EmS: F-D S-U      Marine pollutant: No



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## 15. Regulatory information

Classification and labelling according to Annex I, Directive 67/548/EEC.

EC Label:



Extremely  
flammable

Trade name : **Polymer Grade Propylene / Chemical Grade Propylene**

Contains:

Propene (EC No 204-062-1)

R12: Extremely flammable.

S 9 : Keep container in a well-ventilated place.

S16 : Keep away from sources of ignition. - No smoking.

S33 : Take precautionary measures against static discharges.

Manufacturer:

Borealis AB  
S-444 86 Stenungsund, Sweden  
Telephone: +46 303 86000

Borealis Polymers Oy  
P.O.Box 330, FIN-06101 Porvoo, Finland  
Telephone: +358 9 394900

Borealis Kallo N.V.  
Haven 1568, Sint-Jansweg 2, B-9130 Kallo-Kieldrecht, Belgium  
Telephone: +32 3 570 5211

## 16. Other information

Issued according to Regulation (EC) No 1907/2006, Annex II, and its corrigenda.

Text of R phrases mentioned in Section 2 and 3:

R12: Extremely flammable.

Source:

IUCLID dataset, 2000

(<http://ecb.jrc.it/esis/>)

Environment Guide 71; Environmental properties of chemicals, Finnish Environment Institute, Helsinki 2000.

International Chemical Safety Card, Propylene, November 1998

([http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/\\_icsc05/icsc0559.htm](http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/_icsc05/icsc0559.htm))

International Agency for Research on Cancer (IARC) - Summaries & Evaluations 1994

(<http://www.inchem.org/documents/iarc/vol60/m60-03.html>)

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Issuer: Borealis Group Product Stewardship / Mikaela Eriksson & Arvo Kulo.

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