

SAFETY DATA SHEET

POLYMER GRADE PROPYLENE

Infosafe No.: 1K07M
ISSUED Date : 15/03/2019
ISSUED by: QENOS PTY LTD

1. IDENTIFICATION

GHS Product Identifier

POLYMER GRADE PROPYLENE

Company Name

QENOS PTY LTD

Address

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VIC 3018 Australia

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(03) 9258 7333

E-mail Address

alan.findlay@qenos.com

Recommended use of the chemical and restrictions on use

Plastics manufacture.

Other Names

Name	Product Code
PROPYLENE: POLYMER GRADE	
PROPYLENE EX D801	
PGP	

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Gases under Pressure: Compressed Gas

Flammable Gases: Category 1

Signal Word (s)

DANGER

Hazard Statement (s)

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

Pictogram (s)

Flame, Gas cylinder

**Precautionary statement – Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Precautionary statement – Response

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

P381 Eliminate all ignition sources if safe to do so.

Precautionary statement – Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Propylene	115-07-1	98-100 %
Propane	74-98-6	0-2 %

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention. Product is an asphyxiant gas which when present in an atmosphere in high concentration, leads to reduction of oxygen concentration by displacement or dilution.

Ingestion

Not considered a potential route of exposure. If ingested, do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin

Remove all contaminated clothing immediately. Clothing frozen to the skin should be thawed before being removed. Wash affected area thoroughly with soap and water. For Frostbite: Flush affected areas with lukewarm water. Do not use hot water. Treat as thermal burns. Seek IMMEDIATE medical attention.

Eye contact

If eye tissue is frozen, seek IMMEDIATE medical attention. If tissue is not frozen, immediately irrigate with copious amounts of water for at least 15 minutes. Remove contact lenses. Eyelids to be held open. Seek medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use carbon dioxide, dry chemical, foam, water fog or water mist.

Unsuitable Extinguishing Media

Do not use water jet.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.

Specific Hazards Arising From The Chemical

Extremely flammable gas. Explosive gas-air vapour mixtures may form. Flashback along the vapour trail may occur. Keep away from heat, naked flames, and sparks. Cylinders may explode when heated or may become a projectile in a fire.

Static Discharge. Product can accumulate static charges which can cause an incendiary electrical discharge. Remove gas cylinders from fire area if possible.

Hazchem Code

2YE

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to cool fire exposed surfaces and to protect personnel. Shut off 'fuel' to fire. Extinguish small residual fires with dry chemical powder or water spray. Try to cover liquid spills with foam. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. Isolate the area. Warn occupants of downwind areas of fire and explosion hazard. Use self-contained breathing apparatus (S.C.B.A) and full protective clothing to minimise exposure. Monitor oxygen concentration in confined spaces. Check for leaks using pressure drop test or soapy water on joints and outlets. Shut cylinder valve to stop leak if possible and safe to do so. Use water spray, fog or vapour-suppressing foam to knock down vapours or divert vapour clouds - Do not direct water at source of leak or venting safety devices as icing may occur. Check gas concentration to ensure area is safe before removing protective equipment. Damaged gas cylinders should be returned to the supplier.

7. HANDLING AND STORAGE

Precautions for Safe Handling

VAPOUR OR GAS REDUCES OXYGEN FOR BREATHING. IN CONFINED SPACES MAY CAUSE ASPHYXIATION. Use in a well ventilated area. Use away from all sources of heat and ignition. Avoid skin and eye contact and breathing of gas. Post 'NO SMOKING' signs in area of use. Avoid release of gas into workplace air. Have emergency equipment (for fires, leaks, etc.) readily available. Wear appropriate protective equipment. Use smallest possible amounts in designated areas with adequate ventilation. DO NOT enter confined spaces where gas may have collected. Suck back of water into the container must be prevented. Do not allow back feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions. Maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities

Storage of compressed gas cylinders shall be in compliance with State or Territory regulations. Cylinders shall be stored in a cool, dry, well-ventilated area out of direct sunlight and away from heat and ignition sources. Outside or detached storage is preferred. No part of cylinders shall be exposed to temperatures above 45°C. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties. Keep cylinder valve cover on. Label empty cylinders and store full cylinders separately from empty ones. Consider leak detection and alarm systems, as required. Limit quantity in storage. Restrict access to storage area and post warning signs. Inspect periodically for deficiencies such as damage or leaks. Have fire extinguishers available in and near the storage area. For information on the design of the storeroom, reference should be made to Australian Standard AS 4332 The storage and handling of gases in cylinders. Reference should also be made to all Local, State and Federal regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure value assigned for this material by Safe Work Australia, however propylene is listed as an asphyxiant. When present in an atmosphere in high concentration, it leads to reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for an asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained.

Biological Limit Values

No biological limits allocated.

Other Exposure Information

Qenos recommends 1000 ppm 8hr TWA for propylene.

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Appropriate Engineering Controls

Provide sufficient ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required. The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated. Use explosion proof ventilation equipment.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable organic vapour filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Colourless gas at ambient conditions.

Colour

Colourless

Odour

Faint odour.

Decomposition Temperature

Not available

Melting Point

Not available

Boiling Point

-48 °C

Solubility in Water

0.02% at 38°C

Specific Gravity

0.520 (16°C)

pH

Not available

Vapour Pressure

63 kPa (-57°C)

Vapour Density (Air=1)

Not available

Evaporation Rate

Not available

Odour Threshold

Not available

Viscosity

0.24 cSt at 24°C

Partition Coefficient: n-octanol/water

Not available

Flash Point

-108°C (Method ASTM D56)(Estimated; Gas)

Flammability

Extremely flammable.

Auto-Ignition Temperature

458°C

Flammable Limits - Lower

2.0%

Flammable Limits - Upper

11.1%

Molecular Weight

42

Other Information

Specific Gravity of Vapour (at 1 atm. Air = 1): 1.46

Heat of Vapourization at Boiling & 1 atm.: 437.00

Coefficient of Thermal Expansion (liquid)/°C: 0.0032

10. STABILITY AND REACTIVITY

Reactivity

Reacts with incompatible materials

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Heat, open flames and other sources of ignition.

Incompatible materials

Concentrated mineral acids, halogenated compounds, nitrogen dioxide, oxidizing agents and molten sulphur.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including: carbon monoxide and carbon dioxide.

Hazardous Polymerization

Not available

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this product.

Ingestion

Ingestion unlikely due to form of product. Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

May cause irritation to the mucous membrane and upper airways. An asphyxiant; exposure to high concentrations can cause suffocation. As the amount of oxygen in the inhaled air decreases progressively the following effects can occur: acceleration of pulse and breathing rate, diminished ability to think clearly, disturbed muscular coordination, faulty judgement, muscular efforts lead to rapid fatigue, nausea and vomiting, permanent brain damage, convulsions and death.

Skin

May cause frostbite injuries to skin due to uncontrolled release of compressed gas resulting in redness, tissue destruction.

Eye

May cause frostbite injuries to eyes due to uncontrolled release of compressed gas resulting in stinging, tearing, blurred vision and possibly permanent damage to eyes

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Propylene has been classified by the IARC (International Agency for Research on Cancer) as a group 3 carcinogen. Group 3 - Not classifiable as to its carcinogenicity to humans

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

This material contains asphyxiant gas, which when present in an atmosphere in high concentrations, lead to a reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained. The minimum oxygen content in air should be 19.5 per cent by volume under normal atmospheric pressure. Unconsciousness and death can rapidly ensue in an environment, which is deficient in oxygen.

No health effects in animals treated with this material in two-year bioassay.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No ecological data are available for this material.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Do not discharge this material into waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

The disposal of the waste material and the empty containers must be done in accordance with applicable local and national regulations.

'Empty' containers retain residue (liquid and/or vapour) and can be dangerous. Do not attempt to clean since residue is difficult to remove. Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks and other sources of ignition. They may explode and cause injury or death. All containers should be returned to the supplier. Privately owned containers no longer required, should be disposed of in an environmentally safe manner, and in accordance with applicable regulations.

14. TRANSPORT INFORMATION

Transport Information

This material is classified as Dangerous Goods Division 2.1 - Flammable Gases according to the Australian Code for the Transport of Dangerous Goods by Road or Rail. (7th edition)

Division 2.1 Dangerous Goods are incompatible in a placard load with any of the following:

- Class 1, Explosives
- Division 2.2 Non-flammable, Non toxic gases that have a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Class 3, Flammable Liquids, if both the Division 2.1 and Class 3 dangerous goods are in tanks or other receptacles with a capacity individually exceeding 500L.
- Division 4.1, Flammable Solids
- Division 4.2, Spontaneously Combustible Substances
- Division 4.3, Dangerous When Wet Substances
- Division 5.1, Oxidising substances
- Division 5.2, Organic Peroxides
- Class 7, Radioactive Substances

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN-No: 1077

Proper Shipping Name: Propylene

Class: 2.1

Packaging Group: -

EMS No.: F-D, S-U

Special provisions: -

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN-No: 1077

Proper Shipping Name: Propylene

Class: 2.1

Packaging Group: -

Packaging Instructions (passenger & cargo): Forbidden

Packaging Instructions (cargo only): 200

Special provisions: A1

U.N. Number

1077

UN proper shipping name

PROPYLENE

Transport hazard class(es)

2.1

Hazchem Code

2YE

IERG Number

04P

IMDG Marine pollutant

No

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

Australia (AICS)

All components of this product are listed on the Inventory or exempted.

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed:

February 2018

December 2013

November 2010

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

Contact Person/Point**Empirical Formula & Structural Formula**C₃H₆**Other Information**

CONTACT FOR QENOS PTY LTD:

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END OF SDS

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