PETKIM PETROCHEMICAL COPERATION- SAFETY DATA SHEET

Conforms to Regulation 1907 / 2006 / EC (REACH), Annex II

Product Name	**Propylene (Polymer Grade)**	**Preparation Date**	01.05.2005
		Revision Date	01.01.2009
Form Number	UR.01-BF-00004	**Revision No.**	2
		Page Number	1 / 4

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identification Propylene
Material use: Raw material for manufacture of chemicals and polymers.
Manufacturer PETKIM Petrochemical Company
Telephone Number 0 90 232 616 12 40 (10 lines)
Fax 0 90 232 616 12 48
Web Address www.petkim.com.tr
Emergency Telephone Number 0 90 232 616 12 40 (ext. 1010)

2. HAZARDS IDENTIFICATION

NFPA Ratings

Fire Hazard	4
Health	1
Reactivity	1

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Substances / Concentration %	CAS No.	EINECS No.	Symbol	Risk Phrases*
Propylene, min %99.5	115-07-1	204-062-1	F+	R12
Propane, max % 0.5	74-98-6	200-827-9	F+	R12

*Explanation is given under Section 16.

4. FIRST AID MEASURES

Eye Contact
Remove contact lenses, if worn. Immediately flush eyes with lukewarm water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

Skin Contact
Thaw frostbite slowly with lukewarm water. Do not rub affected area. Do not pull off adherent clothing or objects. Seek medical attention at once.

Ingestion
DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged. Thaw frostbite in mouth slowly with lukewarm water if the exposed individual conscious, ensuring that the individual does not gag or choke. Loosen tight clothing such as a collar, tie, belt or waistband. If the exposed individual is not breathing, qualified personnel should perform emergency rescue resuscitation. Seek immediate medical attention.

Inhalation
Remove affected individual to fresh air immediately. Loosen tight clothing such as collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing.

5. FIRE FIGHTING MEASURES

Auto ignition Temperature
455ºC

Explosion Limits (lower-upper)
2% - 11.1%

Extinction Equipment
Dry chemical, CO^2 (Carbon Dioxide), foam, water fog.

Things must be Avoided
Fire and container explosion hazards are extremely high when this product is exposed to heat or flame. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.

Possible Hazard from Burning and Gasification/Decomposition Products
Upon decomposition, this product emits carbon monoxide, carbon dioxide, and/or low molecular weight hydrocarbons.

Special Equipment
Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

6. ACCIDENTAL RELEASE MEASURES

Personnel Protection
Eliminate ignition sources. Spill or leak area should be isolated immediately for 25 to 50 meters (80 to 160 feet) in all directions. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed. Wear appropriate protective equipment and clothing during clean-up.

Environmental Protection.
Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Spills on water will volatilize rapidly, making containment or recovery difficult.

Cleaning Methods
Remove liquid material with non-sparking approved pumps, skimmers or vacuum equipment. Absorb/adsorb residual materials and clean up with non-sparking tools. Prevent entry into sewers, drains, underground or confined spaces, water intakes and waterways. Contaminated areas may require soil remediation.

7. HANDLING AND STORAGE

Handling
Handle in fully grounded, properly designed, and approved equipment systems that are suitable for flammable liquids. No smoking or open flames permitted in storage, use, or handling areas. Dissipate static electricity during transfer by grounding and bonding containers and equipment. Collect and flare vents. Take special precautions when cold cutting or breaking into lines, or when cleaning and disposing of empty containers.

Storage
Store in grounded, properly designed, approved vessels, and away from incompatible materials. Store and use away from heat, sparks, open flame, or any other ignition source. Storage area should be equipped with appropriate extinguishing capability (e.g. sprinkler system, portable fire extinguishers, flammable gas detectors). Equip storage tank vents with a flame arrestor and inspect vents during winter conditions for vapor ice build-up. Storage tanks should be above ground over a sealed and diked area that holds entire contents.

Storage Temperature
Ambient condition.

Transport Temperature
Ambient condition.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

An eyewash and safety shower should be nearby and ready for use.

Exposure Limits	ACGIH TWA	NIOSH TWA	OSHA TWA
Propylene, min 99,5%	Simple Asphyxiant		
Propane, max 0,5%	2500 ppm	1000 ppm - 1800 mg/m^3	1001 ppm - 1800 mg/m^3

Respiratory System
The use of respiratory protection is recommended only when airborne concentrations and oxygen content cannot be adequately controlled by ventilation or outdoor conditions. Use air-supplied breathing apparatus devices (NIOSH approved).

Eyes Protection
Wear safety glasses or chemical goggles under a full face shield is recommended if contact with liquefied gas is possible.

Skin / Hands / Feet Protection
Wear special gloves, footwear and clothing designed to prevent freezing of body tissues if contact with liquefied gas is possible. Fire resistant or natural fibber clothing is recommended. Synthetic clothing can generate static electricity and is not recommended where flammable vapor release may occur.

Do not eat, drink or smoke in areas where this material *is handled.*

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gas at room temperature, liquefied under pressure.
Color	Colorless.
Odor	Faint
Boiling Range	-48˚C
Melting Point	-185˚C
Flashing Point	-108˚C
Auto ignition Temperature	455˚C
Explosion Limits (lower-upper)	2%-11.1%
Vapor Pressure	10 atm
Density	0,52 g/cm^3
Solubility	0,2% at 38 ˚C

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to Avoid
Keep away from heat, sparks, or open flame.

Materials to Avoid
Nitrates, per chlorates, nitrogen oxides including nitrogen dioxide, nitrous oxide and nitrogen tetroxide, inorganic and organic acids, melted sulphur, halogens, methane.

Hazardous Decomposition Products
Upon decomposition, this product emits carbon monoxide, carbon dioxide, and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Toxicity Limit
This product is not considered acutely toxic.

Toxicity Limit	Inhalation LC 50
Propylene	> 65 000 ppm/4h rat

Contact with Eyes
May cause irritation and corneal injury to the eye.

Contact with Skin
The liquefied form will cause freezing burns (frostbite) to the eyes and skin.

Inhalation
Excessive amounts in the air in an enclosed space will decrease the amount of oxygen and may cause suffocation. At very high exposures, propylene produces an anesthetic effect. Excessive exposures may cause headache, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. High concentrations may trigger heartbeat irregularities, and possible cardiac sensitization.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Major components are highly volatile and will partition rapidly to air. This product is not considered harmful to aquatic life, and has likely limited absorption into soil and sediment.

Persistence/ Degradability
Components are likely to degrade in air within minutes to hours and more slowly over time in soils or ground water into less toxic materials.

Biologically Accumulation
Bio concentration potential is low. Log Kow is 1.77.

Toxicity in Water Media
Product is largely insoluble in water and not considered harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Product
Isolate, contain, and attempt to recover. Prevent entry into sewers, drains, underground or confined spaces, water intakes and waterways. Allow gas to dissipate safely into the atmosphere if permissible or use as fuel. Don't attempt to dispose by uncontrolled ignition. Dispose according to national legislation.

14. TRANSPORTATION INFORMATION

UN No	UN1077
UN Class	2.1
Packing Group	Flammable gas

Marine Transportation

IMO Class	2(2,1)
IMDG Page	2147
Instruction	Flammable gas

15. REGULATORY INFORMATION

Classification / Symbol	F+, Extremely Flammable Gas
Risk Phrases	R12
Safety Phrases	S2, S9, S16, S33

16. OTHER INFORMATION

R12 : Extremely flammable.

S2 : Keep out of the reach of children.
S9 : Keep container in a well-ventilated place.
S16 : Keep away from sources of ignition - No smoking.
S33 : Take precautionary measures against static discharges.

OSHA : Occupational Safety Health Administration
PEL : Permissible Exposure Level
ACGIH : American Conference of Governmental Industrial Hygienists, Inc.
TLV : Threshold Limit Value
PNOC : Particulates Not Otherwise Classified
TWA : Time Weighted Average

The information's given here depends on our present knowledge. Related National and International Legislation and Agreements should be considered by customer with their responsibility.