



IndianOil

# MATERIAL SAFETY DATA SHEET

## Polypropylene (PP)

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY

Chemical Name & Synonyms : Polypropylene (PP) Homopolymer  
Chemical Family : Polyolefin  
C.A.S. No. : **9003-07-0**  
Formula : -  
Manufacturer's Name : Indian Oil Corporation Limited  
Address : Product Application and Development Centre (PADC),  
Panipat Petrochemical Marketing Complex (PPMC),  
Panipat Refinery, Baholi, Panipat – 132 140  
Telephone No. : +91 180-2578091  
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### SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CONTENT (Normal)*	CAS NUMBER	EXPOSURE LIMITS IN AIR		
			ACGIH TLV-TWA	ACGIH TLV-STEL	IDLH
Polypropylene	99.25 wt%	9003-07-0	10 mg/m <sup>3</sup> (inhalable fraction)	NA	NA
Proprietary additives	<=0.75 wt%	Mixture			

\* For different grades of PP, minor changes may be there.

### SECTION 3 - HAZARDS IDENTIFICATION

#### Information Pertaining To Particular Dangers for Man And Environment

Negligible hazard at ambient temperature (-18°C to +50°C)

#### Classification System

Product is not considered to be hazardous under normal processing conditions.

### SECTION 4 - FIRST AID MEASURES

#### GENERAL INFORMATION

At room temperature the product is neither an irritant nor gives off hazardous vapours. The measures listed below apply to critical situations (Fire, incorrect process conditions).

#### Skin Contact

If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissues and polymer. Do not attempt to peel the polymer from skin. Obtain immediately emergency medical attention if burn is deep or extensive.

#### Eye Contact

Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.

#### Inhalation

If symptoms are experienced, move victim to fresh air. Obtain medical attention if breathing difficulty persists.

#### Ingestion

Adverse health effects due to ingestion are not anticipated.

## SECTION 5 - FIRE FIGHTING MEASURES

Flash Ignition Temperature : 335°C  
Auto Ignition Temperature : 350°C  
Flammable Limits : NA

**Suitable Extinguishing Media:** Water, Foam, Carbon Dioxide, Dry Chemical Powder

**For Safety reasons, unsuitable extinguishing media:** None

**Protective Equipment:** Respiratory & Eye protection for fire fighting personnel

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire it can release: Carbon dioxide (CO<sub>2</sub>), and when lacking oxygen (O<sub>2</sub>), carbon monoxide (CO), Ketones & Aldehydes. The products of the burning are dangerous. The formation of hydrocarbons and aldehydes are possible in the initial stages of a fire (especially in between 400°C and 700°C).

**Additional information**

Heat value: 8000 - 11000 kcal/kg

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill and Leak procedure : Sweep up spilled material for use or disposal. Good house keeping must be maintained to avoid potential slipping problem.  
Caution : Keep walking surface free of spilled material to avoid slipping hazard.

## SECTION 7 - HANDLING AND STORAGE

### HANDLING

**Information for safe handling:**

No special requirements necessary, if handled at room temperature.  
Avoid spilling the product, as this might cause falls.

### STORAGE

**Requirements to be met by storerooms and containers:**

This product may react with strong oxidising agents & should not be stored near such materials. Store the bags in areas protected with automatic sprinklers. Storage temperature should be below 60°C.

Do not smoke.

Take precautionary measures to prevent the formation of static electricity.

Electric safety equipment.

Open flames prohibited.

Store the product in bags, car silos, container, or large cartons.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:**

Protect from heat and direct sunlight.

Store container in a well ventilated position.

Store under dry conditions.

**Specific applications** For safe stacking follow the storage recommendations specific for this product

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### ENGINEERING CONTROLS:

Use in a well-ventilated area. If handling results in dust generation, special ventilation may be needed to minimize dust exposure. If heated material generates vapour or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

### PERSONAL PROTECTIVE EQUIPMENT:

### Respiratory system

Product processing, heat sealing of film or operations involving the use of wires or blades heated above 300°C may produce dust, vapour or fumes. To minimize risk of over exposure to dust, vapour or fumes it is recommended that a local exhaust system is placed above the equipment, and that the working area is properly ventilated. If ventilation is inadequate, use certified respirator that will protect against dust/mist.

### Skin and body

Hot material: Wear heat-resistant protective gloves, clothing and face shield able to withstand the temperature of the molten product. Cold material: None required; however, use of gloves is good industrial practice.

### Hand

Hot material: Wear heat-resistant protective gloves able to withstand the temperature of the molten product. Cold material: None required; however, use of gloves is good industrial practice.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

### Eyes

Safety glasses with side shields. Use dust goggles if high dust concentration is generated.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General Information	
Form	: Solid Granules
Colour	: Translucent to White
Odour	: Slight Waxy Odour
Melting point/Melting range	: 130-167°C
Flash point	: > 329°C
Ignition temperature	: > 400°C
Decomposition temperature	: > 300°C
Danger of explosion	: Product is not explosive.
Density	: 0.89-0.94 g/cm <sup>3</sup>
Solubility in / Miscibility with Water	: Insoluble
Additional information	: Soluble in boiling, aromatic chlorinated solvents

## SECTION 10 - STABILITY AND REACTIVITY

### Chemical stability

This product is stable under normal use conditions for shock, vibration, pressure or Temperature.

### Chemical stability - Condition to Avoid

Avoid strong oxidizing agents. Avoid Processing Material over 300°C

### Hazardous Polymerisation

Not likely to occur

### Corrosivity

Product is not corrosive

**Dangerous products of decomposition:** No hazardous decomposition products known at room temperature. At elevated temperature the material will begin to decompose producing fumes that can contain CO<sub>2</sub>, CO, Ketones & Aldehydes.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

#### Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effect known.

### ADDITIONAL TOXICOLOGICAL INFORMATION:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## SECTION 12 - ECOLOGICAL INFORMATION

### Information about elimination (persistence and degradability):

**Other information:** The product is not biodegradable.

#### General notes:

The product is not toxic, small particles can have physical effects on water and soil organisms.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### Product:

#### Recommendation

- 1) Recycle (Reprocess)
- 2) Disposal through controlled incineration or authorised waste dump in accordance with Local, State or Federal Regulations.

### Uncleaned Packaging:

**Recommendation:** Disposal must be done according to official regulations.

## SECTION 14 - TRANSPORT INFORMATION

### Transport/Additional information:

Not regulated as a dangerous goods for transportation.

## SECTION 15 - REGULATORY INFORMATION

### National regulations, other regulations, limitations and prohibitive regulations

PP manufactured by IOCL shall meet the requirement stipulated in IS: 10910 on "Specification for Polypropylene and its copolymer for safe use in contact with foodstuff, Pharmaceuticals & Drinking Water".

Additives incorporated in this grade conform to the positive list of constituents as prescribed in IS: 10909.

The product & additives incorporated in it also comply with FDA: CFR Title 21.177.1520 Olefin Polymer.

## SECTION 16 - OTHER INFORMATION

The information supplied has been based upon the current level of information available, for the purpose of specifying the requirements regarding environment, health and safety in conjunction with the product. They are not to be interpreted as a warranty for specific product characteristics. **Indian Oil Corporation Ltd.** takes no responsibility for inappropriate use, processing and handling by purchasers and users of the product.