

## MSDS-01: -POLYPROPYLENE -MATERIAL SAFETY DATA SHEET

### 1. Product and company identification

**Product identification** POLYPROPYLENE  
**Manufacturer** Rompetrol Petrochemicals S.R.L., company of Rompetrol Group  
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### 2. Composition/information on ingredients

**Chemical name:** polypropylene homopolymer,  
**Synonyms:** PP homopolymer, PP, 1-Propene homopolymer

Composition:	CAS #	% m/m
Polypropylene homopolymer	25085-53-4	> 92
Polypropylene homopolymer	9003-07-0	<3
Proprietary ingredients (trade secret)	-	<5

**Physical appearance:** White translucent pellets ,cakes and powder. Contains slight traces of titanium, chlorine, and aluminium. Various organic and inorganic additives may be incorporated.

**Potential hazards :** Spilled material may present a slipping hazard. Following handling and packing various procedures polypropylene dust may occur. When accumulate in the air, polymer dust may reach an auto-ignition hazard concentration. Molten polymer may cause thermal burns. Whether product processing is done at temperatures above the melting point or it burns without sufficient oxygen, it starts to decompose producing fumes that can contain carbon mono and dioxide, other oxidation unidentified organic compounds. To minimize exposures, adequate room and ventilation should be provided.

Avoid contact with strong oxidizing agents.

### 3. Hazard identification

Polypropylene is not classified as toxic, harmful, irritant or corrosive product.

**Eye contact:** The product may contain small particles that may cause eyes irritation, due to the mechanical action. Gaseous emissions released while burning or processing, may cause eyes irritation/redness.

**Skin contact:** The product may contain small particles that may cause irritation. The contact with molten polymer causes thermal burns.

**Ingestion:** The product presents minimal toxicity. No hazard anticipated from swallowing incidental small amounts.

**Inhalation:** In normal concentrations, polymer dust induces no health effects, except nose and throat mechanical irritation. Excessive exposure at high concentrations may cause coughing and breathing difficulties. The product is not volatile at room temperature. Gaseous emissions released while burning / being processed may cause nose and breathing tract irritation.

### 4. First aid measures

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**Eye contact:** Flush with plenty of water for several minutes. Remove large particles. In case the irritation persists, get medical attention.

**Skin contact:** Powder- flush with water and soap for several minutes. In case the irritation persists, get medical attention. Molten polymer – if molten material comes in contact with the skin, cool under ice water or a running stream of water, in any case not with ice. Cover the affected area with clean cotton sheet or gauze. Do not attempt to remove the material from skin; it could result severe tissue damage. Get medical attention.

**Ingestion:** not applicable

**Inhalation:** In case typical symptoms occur, remove the victim to fresh air. Get medical attention if symptoms persist.

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## 5. Fire fighting measures

**Flashpoint:** > 329°C

**Auto ignition temperature:** > 357 °C

**Ignition conditions:** Polypropylene is a combustible substance but under normal housekeeping conditions there is no risk of ignition. In contact with a flame it becomes soft, flows, ignites and burns with a light flame till exhausting (if it isn't stabilized with a flame retardant agent). In foliated form it ignites easily. Static electricity accumulated during handling/storage, may constitute an ignition source in case a high dust concentration exists.

**Toxic combustion products:** Carbon mono and dioxide, other oxidation organic compounds. In case of burning without sufficient oxygen, a black, dense smoke is released

**Extinguishing media:** Small fire: dry chemicals, water, and carbon dioxide. Large fires: large quantities of water spray.

**Fire fighting procedures:** Keep people away. Isolate fire area and deny unnecessary access. Cool the area with water to localize the fire. Soak with water to cool and to avoid re-ignition.

**Protective equipment for fire fighters:** Complete fire fighting clothing, self-contained breathing apparatus. In case these are not available, fire extinguishing has to be done from a safe distance or a protected location.

**Explosion hazard:** The product, as delivered, has no explosive character. In case of accumulation, polymer dust may form explosive mixtures with the air.

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## 6. Accidental release measures

**Personnel protection:** Remove unnecessary personnel from area. Limit access to the area. Spilled pellets may induce slipping hazard. As possible, the polymer powder contact with the skin will be limited. Molten polymer presents thermal burns hazard in case of skin contact.

**Environment protection:** The released material will not be discharged to the sewerage.

**Clean up:** The contaminated area shall be swept and cleaned, and the residual material collected in dry and labeled containers. For disposal, see section 13.

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## 7. Handling and storage

Store polypropylene in dark, dry and well-ventilated area, away from all heat and ignition sources (sparks, open flames or hot surfaces, welding operations), combustible materials or incompatible substances (strong oxidants agents as perchloric acid, nitric acid, fluorine). Temperature in the storage area shall not exceed 40°C. Avoid powder accumulation by frequent cleaning and suitable warehouses structure. Local exhaust ventilation is recommended for control of airborne dust, fumes and vapors, in enclosed areas.

During handling and processing, polymer may charge electrostatic. Use only machines fitted with earth.

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## 8. Exposure control /personal protection

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**Eyes and hands protection:** Safety glasses for handling at ambient temperature. Thermal resistant gloves, arm protection and goggles/face shield in case of possible contact with molten product.

**Skin and body protection:** In case of polymer handling or processing at elevated temperatures or in a molten state, adequate protective equipment will be used over the skin, to prevent contact.

**Respiratory protection:** For most conditions, no special respiratory protection is necessary. When polymer is heated, general and local ventilation systems will be provided.

**Hygienic measures:** Inside work areas, eating is not allowed. Normal clothing will be kept separately from work and protective equipment.

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## 9. Physical and chemical properties

**Physical state:** Pellets, powder, cakes.

**Color:** white

**Odor:** No odor

**Melting temperature:** >160 °C

**Flash point:** > 329°C

**Auto ignition temperature:** > 357 °C

**Density:** 0.905 - 0.917 g/cm<sup>3</sup>

**Water solubility:** Negligible

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## 10. Stability and reactivity

**Chemical stability:** Polypropylene pellets and cakes are normally stable, unlike stabilized polypropylene powder deteriorates in the presence of the air (unstabilized powder is much more sensitive to the air activity than the stabilized one). It is not corrosive.

**Hazardous polymerization:** No

**Conditions to avoid:** Excessive temperatures, sparks or open flames.

**Materials to avoid:** Strong oxidizing agents (perchloric acid, nitric acid, fluorine).

**Hazardous decomposition products:** carbon mono and dioxide, ketones, acrolein, aldehydes, acetaldehyde, formic aldehyde, formic acid, acetic acid, other oxidation organic products.

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## 11. Toxicological information

**Acute toxicity:** Polypropylene is considered non-toxic for animals, in case of powder inhalation or solid swallowing. Certain additives from the polymer can appear to the plastic surfaces and can determine irritating dermatitis after a prolonged or repeated contact with the skin.

**Local effects:** Unknown

**Sensibility:** Unknown

**Chronic toxicity:** Unknown

**Cancer hazard:** Not established

**Maximum concentration accepted:** Not regulated.

According to Governmental Regulations HG 1218/6.09.2006 related to establishment of minimal health and safety work conditions for personnel protection against chemical agents, for Polypropylene there are not regulations regarding the exposal limits of personnel .

If toxic impurities or decomposition products of polypropylene appears, it has to take into consideration the smallest limits stipulated in local or national legislation

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## 12. Ecological information

**Movement:** Soil- the product will not migrate. Water – the product will float.

**Degradation:** The product is inert and it is not biodegradable. Surface photo degradation is expected with exposure to sunlight. Due to the negligible water solubility, it produces no effects on aquatic environment.

**Bioaccumulation:** Not expected

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**Ecotoxicity:** Minimal, due to the negligible water solubility. Pellets may be harmful for birds and fish if swallowed.

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### 13. Disposal considerations

**Spilled material removal:** Sweep and clean contaminated area, collect residual material into dried, labeled containers. Wash the area with water.

**Wastes disposal:** Polypropylene wastes are recyclable materials. It is preferably that production rejects and production wastes be recycled instead of being disposed.

Disposal of any wastes should observe all national and local valid regulations. In this case should be provided the information regarding the delivered polypropylene : the additives content ,the fillers or other components which can affect the disposal process.

Polypropylene homopolymer can be disposed by burial or controlled incineration, respecting valid regulations regarding gaseous or solid particles discharges. Due to the high heat value, incineration has to be done only in units designed to handle high heats of combustion. In case it is landfilled: polypropylene is inert, does not degrade quickly, form a strong and permanent soil base and does not release gases or other compounds known to pollute water resources.

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### 14. Transport information

**Polypropylene pellets transport:** CP4 euro pallets (1375 kg PP/pallet, distributed in polyethylene or raffia lined with polyethylene bags, containing each one 25 kg of product), big-bags- in truck or rail silo, maritime transport containers

**Polypropylene powder transport:** polyethylene bags, containing each one 25 kg of product, big-bags- in truck or rail silo.

**Polypropylene cakes transport :** Bulk and big-bags- in trucks or rail silo.

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### 15. Regulatory information

**According valid Romanian legislation:**

<b>Label:</b>	<b>Hazard symbol:</b>	Not regulated
	<b>R - phrases:</b>	Not regulated
	<b>S - phrases:</b>	Not regulated

**According international legislation:** To the best of Rompetrol Petrochemicals knowledge, the product contains no chemical subject to SARA /Title III, OSHA or CERCLA requirements.

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### 16. Other information

Rompetrol Petrochemicals does not recommend any company product for applications that involve human tissues or internal fluids contacts (regardless of the contact length of time), for cardiac devices, for medical device components that support human life, as well as for applications that have connections with human reproduction.

The information relates only to the specific product described above and not to use of the product in combination with other materials. The information contained in this material has been compiled from sources that Rompetrol Petrochemicals considers reliable and accurate. However, the information is provided without any warranty, expressed or implied, regarding its correctness and completeness. Because use conditions and valid regulations may differ from one location to another and may change in time, the customer is responsible for deciding whether the product and the information in this document are suitable for his use and for ensuring that his workplace or disposal practices are in compliance with

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APPROVAL DATE:  
07/05/2008  
EDITION/REV: 8/1

valid legal regulations. To determine applicability or effects of any law or regulation with respect to the product, user should consult his legal advisor or the appropriate government agency. Rompetrol Petrochemicals does not undertake to furnish advice on such matters. Rompetrol Petrochemicals does not assume nor authorize anyone to assume on Rompetrol Petrochemicals behalf any liability with the use of the information in this MSDS.

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