MSDS-01: POLYPROPYLENE - MATERIAL SAFETY DATA SHEET

According with Regulation (CE) no.1907/2006 on the registration, evaluation, authorisation and restriction of chemicals (REACH), amended and supplemented by Regulation no. 453/2010 (EU) and Regulation (CE) no. 830/2015.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND COMPANY

1.1. Product identifier	Polypropylene CAS 25085-53-4
No.ECHA	NA
Other means of identification	PP homopolymer, PP, 1-Propene homopolymer
1.2. Relevant identified uses of the substance or mixture and uses advised against	Obtaining products processed by: • extrusion: F301; F401; F501; F500; F600; F400BO; RCF9; RTF3; RSB25; S711; S1001. • injection: J500; J600; J700; J800; J900; J1000; J1100; J1200; J1300; J1400.

1.3. Details of the supplier of the safety data sheet

Producer/ Supplier /Importer:	*S.C.ROMPETROL REFINING* *ADRESS:* B-dul Năvodari, nr. 215, Pavilion Administrativ, 905700 Năvodari, ROMANIA *Tel:+(40) 241 507 090* *Fax:+(40) 241 506 918* WEB WWW.ROMPETROL.COM | EMAIL OFFICE.RAFINARE@ROMPETROL.COM
1.4 . Emergency telephone number	+ (40)-241-507 090 (between hours 08:00-16:00) + (40)-241-506 040 (between hours 16:00-08:00)

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture	Polypropylene is not a substance classified according **to CLP Regulation(EC No.1272/2008**)
2.2. Label elements	**NA**
2.3. Other hazards	Restricted to professional users. It should be handled and stored avoiding contact with open flames or other ignition sources. Combustible material, which ignites hardly, during the combustion possibly making toxic and irritating compounds. Polypropylene powder can form with air explosive mixtures; the product can charge electrostatically.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

No.	Substances/ concentration		Identification data				Classification		
	Chemical Name	Concentration (%m/m)	Registration number	CAS	EC	Index	Symbols	R Statements	H Statements
1	Polypropylene	> 96		25085-53-4	-	-	-	-	-
2	APP	< 3	-	9003-07-0	-	-	-	-	-
3	Antioxidant	< 0.3	-	6683-19-8 31570-04-4 27676-62-6	229-722-6 250-709-6 248-597-9	-	-	-	-
4	Calcium stearate	~ 0.07	-	1592-23-0	216-472-8	-	-	-	-
5*	Slip agent (*)	~ 0.17	-	112-84-5	204-009-2	-	-	-	-
6*	Antiblocking agent (*)	~ 0.15	-	7631-86-9 and 77-92-9	231-545-4 and 201-069-1	-	-	-	-
7**	Nucleating agent (**)	~ 0.03	-	557-05-1	209-151-9	-	-	-	-

NOTE:
*- for grade RCF 9
** - for grade RTF 3

SECTION 4 : FIRST AID MEASURES

There are no special measures required - Polypropilene is not a product classified as toxic, harmful, irritant or corrosive.

4.1. Description of first aid measures

Eyes: Solid small particles may cause eyes irritation, due to the mechanical action. Burning gaseous emissions that arise may cause irritation / redness of the eyes.
Skin: The product may contain small particles that may cause irritation. The contact with molten polymer causes thermal burns.
Ingestion: The product shows minimal toxicity. There are no risks anticipated when small quantities are accidentally swallowed.
Inhalation: In normal concentrations, polymer powder does not cause health effects. Product is not volatile at ambient temperature. Gaseous emissions that arise during processing or burning can cause irritation to nose and respiratory.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation: In case of typical symptoms, remove casualty to fresh air. Requesting medical help if symptoms persist.
Skin contact: Powder - Wash with water and soap for several minutes. In case the irritation persists, get medical attention. Heated or molten product - enter the affected area in cold water and wash with large amounts of cold water jet; do not use ice. Cover with clean gauze or cotton cloth. Do not try to remove the product from the skin because it may appear severe tissue injury. Get medical attention.
Eyes contact: Solid state - product is inert. Remove the particles. Wash with water for several minutes. In case the irritation persists, get medical attention. Melt - eye contact injuries. In this case, wash eyes with large amounts of water for at least 15 minutes and claim the medical care immediately.
Ingestion: In case of an accident, do not induce vomiting. Get medical attention.

	For people which provide first aid will pay attention to personal protection using protection equipment (heat resistant gloves - chemical, polymer molten splash protection).
4.3. Indications of any immediate medical attention and special treatment needed	In case of doubt or if symptoms persist, consult a doctor (see below).

SECTION 5 : FIRE FIGHTING MEASURES

Ignition temperature : >329°C
Self ignition temperature> 357 °C

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 until exhausting (as the case may be flame retardant additives). Form of foil burns easily.

Accumulated static electricity during handling / storage can be a source of ignition if there is a high concentration of polypropylene powder. In order to eliminate this risk it is advisable to use equipment connected to the ground.

General recommendations: The personnel in the area is evacuated. The burned area is isolated and access is denied to unnecessary people

5.1. Means of putting out the fires **Suitable extinguishing media**	Small fires: water, dry chemicals, carbon dioxide. Larges fires: large quantities of water spray.
Unsuitable extinguishing media	Water jet
5.2. Special hazards arising from the substance or mixture	During burning toxic compounds are eliminated - oxide and carbon dioxide, other oxidation and degradation organic compounds, if incomplete combustion and eliminate the black smoke often.
5.3. Recommendations for fire fighters	Complete fire fighting clothing, self-contained breathing apparatus. If not possible, the fire will be extinguished from a safe distance or from a protected location. Cool the area with water curtain to locate the fire. Fire will be extinguished from a safe distance or from a protected location. To avoid reigniting the product should be flooding with water. Water used to extinguish fires contaminated with product should be routed to water treatment plants and not in streams or sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personnel precautions, protection gear and emergency procedures	
6.1.1. For the staff that is not involved in emergency situations	All the people that do not participate in the decontamination of the area will be evacuated. Access in the area will be restricted. Attention will be given to spilled grains because they represent the danger of slipping and falling. All sources of ignition will be removed. Molten products present the risk of producing on contact with skin and inhalation of vapours and smoke that can lead to the irritation of airways. Avoid contact with skin or eyes polymer melt.

6.1.2 For the staff that is involved in emergency situations	Minimum recommended protective equipment for intervention in case of a spill: protective clothing, protective mask, gloves. Minimum protective equipment for the staff that intervenes in case of an emergency (fire) is outlined in section 5.
6.2. Environmental precaustions	The spilled material won't be allowed to reach the sewers. In case this accidentally occurs, the relevant authorities will be notified.
6.3. Methods and material for fire isolation and clean up	The spilled material (in solid state) will be swept and collected in proper packings with corresponding labels. Depending on the case, the product will be recycled/capitalised/eliminated (see section 13) In molten state – all sources of ignition are removed/extinguished. The area will be ventilated. After the solidification of the material it will be loaded in suitable containers for use or disposal.
6.4. References to other sections	See section 5 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling	During handling and processing, the polymer can get electrostatically charged. Grounded equipment will be used. For the safe handling of the product the area will be kept clean and uncluttered. Good ventilation will be insured and the generation of dust and sparks will be avoided as much as possible. In case of accidental release, see point 6.
7.2. Condition for safe storage, including any incompatibilities.	Polypropylene shall be stored so that it won't be directly exposed to sunlight, away from heat and ignition sources, combustible materials or incompatible substances. The storage area most be dry, clean and ambient temperature not exceeding 50°C. Unfavourable storage conditions may lead to a slight paraffinic odour of polymer. Avoid accumulation of dust by frequent cleaning and proper storage building. If storage is indoors, it should be used local exhaust ventilation (natural and / or mechanical). In storage and handling areas it is not allowed the smoking or working with uncontrolled fire.
7.3. Final specific uses	Obtaining: - general-purpose products, processed by injection; - pipes, boards, bodies blown, obtained by extrusion or blow; - raffia - type strips, extrusion processing; - film packaging for general purpose processing by extrusion; - monofilament and fibber extrusion processing.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters	Values for occupational exposure: NA Biological limit values: NA Recommended monitoring procedures: monitoring of chemical hazards in the workplace: NA DNEL and PNEC Value: NA
8.2. Exposure controls	Risk management measures for health: This product is used in molten state. For controlling use risks, it is necessary to wear protective gear. The work area will provide eye wash stations for emergency and showers.
8.2.1. Appropriate engineering controls	Periodic medical examination for workers, especially for those with exposure to volatile organic compounds emissions.

	Providing natural or artificial exhaust ventilation for the area which involve handling, storing, processing of polypropylene. Ensure water sources in the vicinity of molten polymer jobs / at high temperatures. In work areas is not allowed eating. Street clothes will be kept separately from work and protective equipment.
8.2.2. Individual protective measures, like individual protective equipment	**Protection of the eyes and hands: Protective glasses for** handling at ambient temperateure. For possible contact with molten product, heat resistant gloves, arm protective equipment and protective glasses/shield. **Protection of the skin and body**: in case of processing/handling the polymer at high temperatures or in molten state, proper protective hear will be worn to prevent contact. **Respiratory protection**: in most cases there are no special measures required. In case of heating of the polymer will be insured general and local ventilation.
8.2.3. Environmental exposure control	In work areas is not allowed eating food, drinking and smoking. Street clothes will be kept separately from work and protective equipment. Information on environmental protection: It is not biodegradable - is expected to be found in soil and in aquatic floats. Measures for environmental risk management: Do not discharge the product into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information regarding basic physical and chemical properties	Appearance: Physical Condition: Solid: Granules, cakes, powder Colour: white Odour: odourless Melting Temperature: >160 °C Inflammability Point: > 329°C Ignition Temperature: > 357 °C Density: 0.905 - 0.917 g/cm^3 Solubility in water: negligible
9.2. Other information	Not available / applicable data on other characteristics

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	Polypropylene, pellets or cakes, is stable under normal conditions while polypropylene powder stabilized with additives degrades in the presence of air.
10.2. Chemical stability	Stable product in normal conditions of temperature and pressure. Not corrosive.
10.3. Dangerous reaction possibilities	In normal conditions it doesn't react chemically and does not polimerise accidentally.
10.4. Conditions to avoid	Exposure to excessive temperatures (> 300°C), sparks or open fire, material that causes ignition and electrostatic charge.
10.5. Incompatible materials	Powerful oxidising agents (chlorines, nitrates, peroxides, free halogens), acetates, flourides, nitrates, organic solvents.
10.6. Dangerous decomposition compounds	In case of burns, carbon oxide and bioxide, oxidation organic compound vapours (acrilein, aldehydes, acetaldehyde, formaldehyde, formic acide, etc.).

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological health effects

Polypropylene is considered non-toxic for human and animals when inhaling the dust or ingesting the solids. Prolonged inhalation of the products which results at heat processing can lead to neurological problems. Some additives from the polymer can appear on the surface of the plastic and can cause irritating dermatitis after prolonged or repeated contact with the skin.
Irritating effects (for eyes, skin or airways): moderate through prolonged exposure.
Sensitising effects: no proven effect
Toxicity through repeated administration: no proven effect
CMR effects: no proven effect

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Ecotoxicity

-Toxicity data for aquatic organisms	Polypropylene is practically insoluble in water (floats on the surface or water) and thereby doesn't effect the aquatic medium.
-Toxicity data for micro and macro – organisms in soil	No data available.
-Toxicity data for other organisms (ex: birds, bees, plants)	Solid product fragments can be harmful to birds and fish when ingested.
-Inhibitory effects on the actifity of microorganisms in wastewater treatment facilities.	No data available.

12.2. Persistence and degradability

The product is inert and not biodegradable. When exposed to light, the product surface degrades
Degradation Half-life: Not data available.
Data regarding the potential for degradation in wastewater treatment plants: Not data available.

12.3. Bioaccumulation potential

It is not anticipated.

12.4. Soil mobility

Product doesn't migrate.

12.5. Result of PBT and vPvB evaluations

Product is not classified PBT or vPvB

12.6. Other adverse effect

Polypropylene is not a dangerous product.

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Uncontaminated polypropylene wastes are recyclable materials. It is recommended that rejects or waste resulting from manufacturing to be recycled, not eliminated.

If will be decided to recover of the waste material, will be considered the addition of additives, fillers or other ingredients that can influence the process of elimination.

Waste polypropylene can be eliminated through incineration / co-incineration controlled in order to generate energy, in systems that can take high thermal loads, in accordance with EU regulations / national and local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. ONU number	Product not regulated by RID, ADR, DOT, IATA,ICAO, IMDG stipulations.
14.2. Correct determination of ONU for sending	NA
14.3. Class (classes) of hazard for transportation	NA
14.4. Packaging group	NA
14.5. Environmental dangers	NA
14.6 Special precaustions for users.	Polypropylene pellet transportation: polyetylene bags, raffia bags, big bags or container - liner. Polypropylene powder transportation polyetylene bags or big bags. Polypropylene cake transportaion bulk and big bags. Can be transported through automotive means, railroads, naval containers or container - liner.
14.7. Transportation în bulk according to Anex II of the MARPOL convention and IBC code	-

SECTION 15 : REGULATORY INFORMATION

15.1. Regulations/Legislation in the field of security, health and environment specific for the substance mixture in question	Is not specifically regulated in the field of security, health or environment.
15.2. Chemical security evaluation.	NA

SECTION 16 : OTHER INFORMATION

List of relevant precautionary statements (P)	P210 - Keep away from heat /sparks/open flames /hot surfaces-No smoking ; P 273 - Avoid release to the environment
Specialist instruction recommendations	Training staff involved in handling / use / transport with this product safety data sheets.
Provider recommended restrictions for use	It will be used only for the relevant application identified in section 1.2.
Written references /sources	- Regulation (EC)1272/2008 regarding classification, labelling and packaging of substances and mixtures - Regulation REACH no. 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals as amended by Regulation (CE) no.453/2010 and Regulation (CE) no. 830/2015. - Rules for international rail transport (RID) ; - European Agreement concerning the international carriage of dangerous goods (ADR) ; - Maritime Dangerous Goods Code (IMDG) ; SC Rompetrol Refining Specialized Internal Documents and Specific Literature ;

Company Department /responsible on MSDS elaboration;	P&E , QHSE
Clear evidence of information having been added, deleted or revised	The entire Security Data Sheet regarding registration, evaluation, authorization and restriction has been revised in concordance with Regulation (CE) 1907/2006 changed and amended by Regulation 453/2010 and by Regulation 830/2015.

Legend of abbreviations and acronyms.

ECHA	European Chemicals Agency
GHS	Harmonised Classification System
CLP	Regulations regarding Classification, Labelling, Packaging
ADR	European treaty regarding international transportation of dangerous goods on roads
RID	International transportation of dangerous goods on railroads
IMDG	Code of International naval transportation of dangerous goods

Note :

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