

MSDS-04: HDPE - 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).

SECTION 1: IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND COMPANY

1.1. Product identifier	High density polyethylene
No. CAS	9002-88-4
No.ECHA	NA
Other means of identification	Low pressure polyethylene; HDPE; PJP
Chemical formula	(-C ₂ H ₄ -) _n
1.2. Relevant identified uses of the substance or mixture and uses advised against	Obtaining products processed by extrusion, blowing and injection
1.3. Details of the supplier of the safety data sheet	
Producer/ Supplier /Importer:	<i>S.C.ROMPETROL REFINING SA (COMPANY OF ROMPETROL GROUP)</i> ADRESS: B-dul Năvodari,nr. 215, Pavilion Administrativ, cam. 21, 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 08:00-16:00) + (40)-241-506 040 (between 16:00-08:00)

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture	
2.1.1. Classification of the substance according to 67/548/EEC Directive	Unclassified
Risk phrases	-
Safety phrases	-
Physical-Chemical hazards	Solid state spilled material may present a slipping hazard. HDPE is a compound chemically stable at room temperature and under normal conditions of handling does not present any particular risks. It is not a flammable compound. Following handling and packing various procedures polyethylene dust may occur.
Human health hazard	HDPE is not a product classified as toxic, harmful, irritant or corrosive. In case of ignition and combustion in the presence of insufficient oxygen, it produces smoke that contains carbon oxide and dioxide, other organic compounds by oxidation / decomposition. As a result of heating / melting, the product may irritate eyes, skin and airways. Service staff should take measures to avoid contact with molten polymer.

Environment hazards

No risks. Solid polymer is insoluble and it is considered environmentally inert. Do not throw waste material on the ground, in drains, sewers, water courses. In case of accidental spill, due to high molecular weight, most likely, the product will remain above ground, and in case of flowing water, the product will float.

2.1.2. Classification of the substance according to CLP Regulation (EC No.1272/2008)

NA

Label elements
According to 1272/2008 Regulation
Hazard Pictogram(s) NA

Signal word(s) NA

Code(s) NA

Precautionary statements (P) NA

2.3. Other hazards

Restricted to professional users.
 It should be handled and stored avoiding contact with open flames or other ignition sources.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

No.	Substances/ concentration		Identification data				Classification		
	Chemical Name	Concentration (%m/m)	Registration number	CAS	EC	Index	Symbols	R State ments	H State ments
1	HDPE	> 99.5	-	9002-88-4	-	-	-	-	-
2	Antioxidant	0.06	-	6683-19-8 and 31570-04-4	229-722-6 and 250-709-6	-	-	-	-
3	Calcium stearate	0.16	-	1592-23-0	216-472-8	-	-	-	-
4	UV Absorbant	<0.2	-	065447-77-0	-	-	-	-	-

SECTION 4 : FIRST AID MEASURES

4.1. Symptoms and effects

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

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. Immediate medical attention

In case of doubt or if symptoms persist, consult a doctor (see below).

4.3. First aid measures

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: NA.

Other informations

For people who provide first aid will pay attention to personal protection using protection equipment (heat resistant gloves - chemical, polymer molten splash protection).

SECTION 5 : FIREFIGHTING MEASURES

5.1. Extinguishing media

Polyethylene 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 (if it is not additivated with fire retardant). Form of foil burns easily.

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

5.2. Suitable extinguishing media

Small fires: water, dry chemicals, carbon dioxide.

5.3. Unsuitable extinguishing media

Larges fires: large quantities of water spray.

5.4. Special exposure hazards

During burning to eliminate toxic compounds - oxides and carbon dioxide, the oxidation of organic compounds, if incomplete combustion and eliminate the black smoke often.

5.5. Protective equipment 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.

5.6. Other informations

Remove staff from the area. Isolate fire area and deny access to persons unnecessary. Cool with water curtain area 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.

5.7. Special precautions for fire fighters

Water used to extinguish fires contaminated with product should not be routed to streams or sewer.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personnel precautions

Remove all sources of ignition in the area. Will evacuate all persons who are not participants in the decontamination area. It restricts access to the area. Spilled polymer can cause slipping. As possible will limit contact with skin. Polymer melted at risk of thermal burns on contact with skin.

6.2. Precautions for environmental protection

Do not throw spilled material to the sewers. If this happens accidentally, to notify relevant authorities.

6.3. Cleaning up methods

For solid state - clean area, put the material in containers dry labelled. For disposal see section 13. For Melt - turn off / remove all sources of ignition. Vent the area. After solidification of the material load in suitable containers for use or disposal.

SECTION 7: HANDLING AND STORAGE

7.1. Technical measures	During handling and processing, the polymer can be electrostatic charged. It will be used grounded equipment. For safe handling of the product the area is kept clean and in order. As possible, ensure a good ventilation of working area.
Measures for environmental protection	In case of accidental release, see point 6.
Other specific requirements	It is forbidden to smoke or near ignition sources (sparks, flames or hot surfaces, welding operations), combustible materials or substances incompatible.
7.2. Storage	
Condition for safe storage	Polyethylene shall be stored away from heat or ignition sources (sparks, flames or hot surfaces) and from incompatible substances. Storage place should 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.
Specific requirements for storage	If storage is indoors, it should be used local exhaust ventilation (natural and / or mechanical). In storage and handling areas it is not allowed smoking or working with uncontrolled fire.
Specific uses	Getting through: - Extrusion of monofilaments, tapes, ropes and fabrics; - Blowing small hollow bodies; - Injection of household items, small industrial parts with complex profile, auto parts.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure limits values	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. To prevent accidents, it is necessary to wear protective gear. The work area will provide eye wash stations for emergency and showers.
Control of professional exposure	Periodic medical examination for workers, especially for those with exposure to volatile organic compounds emissions.
Technical measures	Providing general and local exhaust ventilation and water sources near jobs which involve molten polymer at high temperatures.
8.3. Individual protection measures	
Respiratory protection	In most cases no special measures are required. When heating the polymer, will provide general and local ventilation systems. In case of fire, it is required the breathing equipment.
Hand Protection	Thermoresistent gloves
Eye Protection	Glasses / screen protection for working with molten polymer; Avoid wearing contact lenses at work.
Skin Protection	Personal protective equipment; The processing or handling polymer at high temperatures or molten state, will wear cotton clothing, boots and apron, heat resistant.
Hygiene	In work areas is not allowed eating, drinking and smoking. Street clothes will keep separate working clothes and protective.

8.4. Environmental exposure controls

Information on environmental protection: It is not biodegradable - is expected to be found in soil and in aquatic floats. Measures for environmental risk management: No discharge into the environment.

 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance:
 Physical Condition: Solid: Granules, cakes, powder
 Colour: white
 Odour: odourless

9.2. Important information on health, safety and environmental Concentration

Melting Temperature: 190-210 °C
 Inflammability Point: > 340°C
 Density: 0.94 - 0.97 g/cm³
 Solubility in water: negligible

9.3. Other information

Not available / applicable data on other characteristics

 SECTION 10: STABILITY AND REACTIVITY

Stability

Polypropylene pellets or cakes is stable under normal conditions. Not corrosive.

**Conditions to Avoid
 Material to avoid**

Extreme heat, ignition sources.
 Strong oxidising agents (chlorides, nitrates, peroxides, halogen free) organic solvents.

Hazardous decomposition products

In case of combustion, iron oxide and carbon dioxide, steam oxidation of organic compounds, smoke.

 SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicological and other health effects

- Toxicokinetics, metabolism and distribution - NA
- Acute Toxicity (single exposure) - NA
- Inhalation: In normal concentrations, polymer powder does not cause health effects. Product is not volatile at ambient temperature. Gaseous emissions that arise during processing can burn or cause irritation to the nose and airways.
- Contact with skin: moderate irritation to skin by prolonged exposure; Contact with molten polymer may produce burns
- Eye contact: in solid state, may cause eye irritation, melt may produce burns
- Swallowing: no negative effects are anticipated from swallowing small amounts of product;
- Irritant effects (eye, skin or respiratory): moderate, prolonged exposure;
- Effect corrosive : No;
- Sensitivity effect : No data ;
- repeated dose toxicity : No data ;

Summary of test information

: no available data

 SECTION 12 : ECOLOGICAL INFORMATION

12.1. Ecotoxicity Data
Toxicity to aquatic organisms

HDPE is practically insoluble in water and has no effect on the aquatic environment.

Toxicity data for micro and macro – organisms in soil

In the terrestrial environment material is unexpected to remain in the soil an is not biodegradable.

Toxicity data for other organisms (eg.: Birds, bees and plants)

Product solid particles may be harmful for birds and fish if swallowed.

Inhibitory effect on the activity of micro-organisms in wastewater treatment plants

Not data available.

Summary of test Information

Not data available.

12.2. Mobility

Ground - the product will not migrate;
 Water - the product will float
 - distribution (known or presumed) among the different compartments of the environment: no data available
 - surface tension: no data available
 - absorption / desorption: not available

12.3. Persistence and degradability

The product is inert and not biodegradable. Is practically insoluble in water, no effect on the aquatic environment. When exposed to light, degrades the product surface.

The potential data degradation: no data available.

Degradation half-life: no data available

Potential degradation in wastewater treatment plants: no data available.

12.4. Bioaccumulation potential

It is not anticipated.

Data on biotic mass accumulation potential: No data available

Partition coefficient n-octanol/water: No data available

Bioconcentration factor: No data available

**Results of PBT assessment
 Other adverse effect**

Product is not classified PBT or vPvB

No data available

 SECTION 13 : DISPOSAL CONSIDERATIONS

Description and measures for handling waste
Methods of waste disposal and contaminated packaging

Polyethylene is recyclable waste material. It is recommended that the scrap or waste from the factory to be recycled instead of being removed.

For waste disposal, will comply with national and local regulations in force. If it is decided to eliminate waste, it will consider the addition of additives, fillers or other components that may influence the process of elimination.

Polypropylene polymer waste can be disposed of by final storage in areas approved under legislation or by controlled incineration in order to generate energy, in units that could handle high thermal loads, in accordance with EU regulations / national and local force.

SECTION 14: TRANSPORT INFORMATION

Special precautions in transport and handling

Transport classification: not covered by the provisions RID, ADR, DOT, IATA, ICAO, IMDG

Transport Polypropylene pellets: polyethylene bags, big bags in vehicles, railway or shipping containers

Transport Polypropylene powder: polyethylene bags, big bags in vehicles, railway

Transport Polypropylene cakes: bulk, big bags in vehicles, railway

SECTION 15 : REGULATORY INFORMATION

Chemical Safety Report: NA

Regulatory information: NA

Hazard symbol: NA

Specific provisions

National /Local Regulation

- HG 1408/2008 -classification, packaging and labelling of chemicals;
- HG 1048/2006 on the minimum health and safety requirements for use by workers of personal protective equipment at work;
- HG 1218/2006 establish of the minimum requirement for safety and health at work to protect workers from risks related to chemical agents;
- Law no 319/2006 health and safety at work;
- Law no 426/2001 the waste regime;
- Regulation (EC)1272/2008 regarding classification, labelling and packaging of substances and mixtures that change and amending Directive 67/548/EC;
- REACH Regulation nr.1907/2006 concerning the Registration; Evaluation, Authorisation and Restriction of Chemicals as amended by Regulation (CE) nr.453/2010;

SECTION 16: OTHER INFORMATION

List of relevant precautionary statements (P)

P210 - Keep away from heat /sparks/open flames /hot surfaces-No smoking ;

Recommendations on training of specialists

P 273 - Avoid release to the environment

Training staff involved in handling / use / transport with this product safety data sheets.

Provider recommended restrictions for use

NA

Written references /sources

- Regulation (EC)1272/2008 regarding classification, labelling and packaging of substances and mixtures that change and amending Directive 67/548/EC ;
- Regulation REACH nr.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals as amended by
- Regulation (CE) nr.453/2010
- ESIS – European Information System which containing data base on chemicals;
 (<http://esis.jrc.ec.europa.eu/>)
- (RID) - Rules for international rail transport ;
- (ADR)- European Agreement concerning the international carriage of dangerous goods;
- (IMDG)- Maritime Dangerous Goods Code ;
- 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 has been revised in concordance with 1907/2006 Regulation changed and amended by 453/2010 Regulation.

Note :

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