

## MSDS-12: HDPE - WAX 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 No. 830/2015.

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

<b>1.1. Product identifier</b>	<b>HDPE WAX</b>
<b>No.ECHA</b>	CAS 9002-88-4
<b>Other means of identification</b>	NA
<b>1.2. Relevant identified uses of the substance or mixture and uses advised against</b>	homopolymer/copolymer high density polyethylene – LOW POLYMER  Industrial use - thermal processing in order to obtain wax products.
<b>1.3. Details of the supplier of the safety data sheet</b>	
<b>Supplier</b>	S.C. ROMPETROL REFINARE SA (COMPANY OF ROMPETROL GROUP) ADDRESS: B-dul Năvodari,nr. 215, Pavilion Administrativ, cam. 21, 905700 Năvodari, ROMANIA Tel:+(40) 241 507 090 Fax:+(40) 241 506 918 WEB <a href="http://www.rompetrol.com">www.rompetrol.com</a> EMAIL <a href="mailto:office.rafinare@rompetrol.com">office.rafinare@rompetrol.com</a>
<b>1.4 . Emergency telephone number</b>	+ (40)-241-507 090(between hours 08:00-16:00) + (40)-241-506 040(between hours 16:00-08:00)
<b>Office for International Health Regulations and Toxicological Information-Bucharest</b>	+ (40)-21-318 3606(between hours 8:00 -15:00)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Clasification of the substance or mixture

<b>2.1.1. Clasification of the substance according to CLP Regulation (EC No.1272/2008)</b>	Unclassified
<b>2.1.2. More information</b>	
<b>Physical-Chemical hazards</b>	Solid product with potentially flammable properties due to solvent content (volatile compounds); inside enclosed areas there may be vapour accumulations, which in mixture with the air may form explosive mixtures.
<b>Human health hazard</b>	When producing and during processing the wax is in molten state, which involve handling caution because it may produce skin thermal burns in case of contact.  Solid state spilled material may present a slipping hazard.
<b>Environment hazards</b>	The product may irritate the eyes, the skin, the breathing tract and the central nervous system. It is harmful for the aquatic organisms and may induce long term adverse effects on aquatic environment.

## 2.2. Label elements According to 1272/2008 Regulation

### Hazard Pictogram(s)



### Signal word(s)

DANGER

### Hazard statements (H)

H 228: Flammable solid.

### Precautionary statements (P)

P 210: Keep away from heat/sparks/open flames /hot surface.

### Prevention

P 240: Ground/bond container and receiving equipment .

P 241: Use explosion proff electrical/ventilating/lighting/equipment.

P 280: Wear protective gloves /protective clothing/eye protection / face protection .

### Precautionary statements (P)

P370 +378 : In case of fire use powder, CO<sub>2</sub>, sprayed water.

### Intervention

### Precautionary statements (P)

NA

### Storage

### Precautionary statements (P)

NA

### Disposal

### 2.3. Other hazards

Restricted to professional users.

## SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

No.	Substances/ concentration		Identification data			
	Chemical Name	Concentration (%m/m)	Registration number	CAS	EC	Index
1	HDPE WAX	> 96	NA	9002-88-4	-	-
2	Volatiles (n-hexan)	< 4	01-2119475133- 43-0010	265-151-9	64742-49-0	649-328-00-1

Note : Volatile compounds in the solid product are represented by solvent traces and light hydrotreated petroleum fractions, containing hexanes (n and iso); this document contains information and recommendations that also take into account the health and environmental hazards associated with the solvent and its contents.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

In solid state, under normal conditions, the product is not a risk to human health.

In case of emergency, first aid measures will be taken.

### Inhalation

In case of inhalation of product particles or vapors resulting from processing, carry the victim out to fresh air. Request medical help if symptoms persist.

### Eyes

Solid small particles may cause eyes irritation, due to the mechanical action, flush with plenty of water. Request medical help if symptoms persist. In case of eye contact with molten product, flush affected area with large amounts of cold water. Get medical attention.

### Skin

If heated or molten polymer comes in contact with the skin, immerse in or flush affected area with large amounts of cold water. Cover the affected area with clean cotton sheet or gauze baandage. Do not attempt to remove the material from skin; it could result severe tissue damage. Get medical attention.

### Ingestion

No probable way. There are no risks anticipated when small quantities are accidentally swallowed. Do not induce vomiting. Get medical attention.

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

##### Inhalation:

Vapors emitted during processing can cause irritation of the nose and airways. Excessive exposure to high concentrations can cause coughing and shortness of breath, headache and dizziness. Inhalation of solvent vapors over a longer period affects the central nervous system.

##### Skin contact

The product may contain small particles that may cause irritation. The prolonged contact with the skin can produce irritation and dermatitis. The contact with heated or molten polymer may causes skin thermal burns.

##### Eyes contact

Solid small particles may cause eyes irritation; eye splashing with melted product may cause burns / eye damage.

##### Ingestion

It is an unlikely exposure pathway - no possible effects are known.

#### 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: FIREFIGHTING MEASURES

HDPE wax is a combustible and potentially flammable substance due to the solvent content, but under normal housekeeping conditions there is no risk of ignition. Hazardous melting and dripping may occur at high temperatures. In contact with a flame is melting, flows, ignites and burns until exhausting.

**General recommendations:** The personal 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 , powder extinguisher , carbon dioxide .  
Larges fires: large quantities of water spray.

##### Unsuitable extinguishing media

NA

#### 5.2. Special hazards arising from the substance or mixture

During burning are eliminated toxic compounds – carbon monoxide and carbon dioxide, oxidation organic compounds, during incomplete combustion is eliminate the black smoke often.  
 In molten state, there is the possibility of fire propagation.

#### 5.3. Recommendations for fire fighters

Fire fighting equipment - 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 flooded with water.

Water used to extinguish fires are contaminated with product and should be routed to water treatment plants 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

Remove all sources of ignition in the area. All persons who have not involved as participants in the area decontamination will be evacuated. Restricts access to the area. Spiled polymer can cause risk of slipping. The molten product presents a risk of thermal burns on skin contact and vapor / smoke inhalation may cause respiratory irritation.

### 6.1.2. For the staff that is involved in emergency situations

As possible the contact with skin will be limited.  
 Minimum recommended protective equipment for intervention in case of a spill of solid product: protective clothing and shoes, protective mask, gloves. In case of spill of molten product: protective clothing, visor face protection and, where appropriate, respiratory protection mask.

Minimum protective equipment for the staff that intervenes in case of an emergency (fire) is outlined in section 5.

### 6.2. Precautions for environmental protection

The spilled material won't be allowed to reach the sewers. In case this accidentally occurs, act in accordance with internal procedures and applicable regulatory requirements.

### 6.3. Methods and material for fire isolation and clean up

For solid state - clean area, put the material in dry and labeled containers. For disposal see section 13. In molten state - turn off / remove all sources of ignition. Ventilates the area. After solidification of the material is load 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, avoid vapor inhalation and the contact of the product with eyes, skin and clothes; good ventilation of the work area will be ensured.

### 7.2. Condition for safe storage, including any incompatibilities

The product shall be stored away from the heat or ignition sources (sparks, flames or hot surfaces) and incompatible substances. If it is stored near heat sources, the material may soften, making it awkward to handle and there is a risk of explosive mixtures (especially in enclosed spaces) due to evaporation of volatile compounds. If stored in a solid state, the product should be stored in closed containers (to avoid contamination) on open but covered platforms. 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.

All basic hygiene rules in the workplace will be respected - no food / beverages will be consumed in the work area, washing hands after handling the product, street clothes will be kept separate from the work and protection equipment and regular decontamination of work equipment will be complied.

### 7.3. Final specific uses

Obtaining wax products by thermal processing.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

Values for professional exposure (HDPE wax): NA

Other chemical agents (According to Governamental Regulation HG 1218/2006):

n-hexane (solvent): for 8 hours-72 mg/Nm<sup>3</sup>; 15 minutes-not regulated

Biological limit values: NA

Recommended monitoring procedures: chemical noxing monitoring at workplaces

### 8.2. Exposure controls

DNEL and PNEC Value : NA

Periodic medical examination of workers, especially those with exposure to emissions of volatile organic compounds.

Risk management measures for health: This product is used in molten

state. To prevent accidents, it is necessary to wear safety equipment. The work area will provide eye wash stations for emergency and showers.

### 8.2.1. Appropriate engineering controls

Providing general and local exhaust ventilation and water sources near jobs which involve molten polymer at high temperatures. It is recommended the use of fixed / mobile detectors for gas / explosive mixtures.

### 8.2.2. Individual protective measures, like individual protective equipment

#### Eye Protection

Glasses / screen protection for working with molten polymer; avoid wearing contact lenses at work. Safety glasses against dust for solid handling.

#### Hand Protection

Protective thermoresistant gloves for general industrial use and / or heat resistant when handling the molten product

#### Skin Protection

In case of processing or handling of the product at high or molten temperatures, the general protective equipment will be filled with sorts, boots / leggings appropriate to the type of activity and possible exposure to prevent contact.

#### Respiratory protection

In areas uncovered and for a solid product, no special measures are required.  
 During thermal processing the volatile concentration in the area must be kept below allowed limits. When heating the polymer, will be provided general and local ventilation systems and means of protecting employees - mask with filter cartridge / respiratory protective device.

### 8.2.3. Environmental exposure controls

Monitoring of emissions of ventilation systems in the environment is recommended; depending on the activity developed, additional dust, gas (filters) systems may be required.  
 It is not biodegradable - is expected to be found in soil and in aquatic floats. No discharge into the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information regarding basic physical and chemical properties

a) Appearance:	Physical Condition : Solid – waxy solid mass, sticky. Colour: Variable: white -yellowish-gray-brown
b) Odour:	slight hydrocarbons
c) Melting temperature:	45-115 °C
d) Flammability (solid, gas):	50 – 55 °C
e) Ignition time:	aprox. 30 sec
f) Explosive properties (for n-hexane):	1.1 – 7.5 % v/v
g) Density:	0.70 g/cm <sup>3</sup>
h) Water solubility:	Insoluble in water
i) Auto ignition temperature:	Undetermined

### 9.3. Other information

Not available / applicable data on other characteristics.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

HDPE wax is stable under normal conditions.

### 10.2. Chemical Stability

Stable product under normal temperature, pressure and shock conditions. Not corrosive.

### 10.3. Dangerous reaction

In normal conditions it doesn't react chemically and does not

<b>possibilities</b>	polimerise accidentally. At high temperatures, vapors (volatile compounds) may be generated which, in enclosed spaces, pose a risk of form potentially explosive atmospheres.
<b>10.4. Condition to avoid</b>	Excessive temperatures, sparks or open flames, processing in closed, unventilated areas, prolonged exposure to direct sun light.
<b>10.5. Material to avoid</b>	Strong oxidizing agents (hot nitric acid, peroxides, halogens), hydrocarbons (benzene, gasoline, petroleum ether) and chlorinated hydrocarbons, which soften the product
<b>10.6. Hazardous decomposition products</b>	In case of combustion, carbon mono and dioxide, vapours of oxidized organic compounds.

## SECTION 11 : TOXICOLOGICAL INFORMATION

<b>11.1. Information on toxicological health effects</b>	No data / studies available.
a) Acute Toxicity	Acute inhalation of volatile organic compounds causes moderate respiratory irritation. There is no evidence of toxicity at repeated exposure (chronic toxicity).
b) Contact with skin	Moderate irritation to skin by prolonged exposure; contact with molten polymer may produce burns.
c) Eye contact	In solid state, may cause eye irritation, in molten state may produce burns.
d) CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)	No data on HDPE wax is available. Hexane (solvent component) is classified as toxic for reproduction (categ.2), may impair fertility.
e) Aspiration hazard	Aspiration hazard due to airway obstruction.

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1. Toxicity</b>	HDPE wax is practically insoluble in water (the product will float) and has no effect on the aquatic environment. Solid product fragments can be harmful to birds and fish in case of ingestion. Solvent traces can cause the product to be harmful to aquatic organisms, with the risk of long-term adverse effects on the aquatic environment.
<b>12.2. Persistence and degradability</b>	The product is inert, is found in soil and is not biodegradable.
<b>12.3. Bioaccumulation potential</b>	No data available. N-octanol/water partition coefficient: No data available.
<b>12.4. Soil mobility</b>	The product will not migrate.
<b>12.5. Result of PBT and vPvB evaluations</b>	Product is not classified PBT or vPvB.
<b>12.6. Other adverse effect</b>	There are no anticipated effects on biological processes.

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1. Waste treatment methods</b>	Waste recovery is recommended by: - by recycling (by mechanical and chemical treatments) - by incineration / co-incineration in order to generate energy, in
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	<p>plants that can take up high thermal loads in accordance with the community / national and local regulations in force.          The addition of other components involved consideration of their influence, based on related documentation.          Waste disposal of waxes will be done in compliance with national regulatory requirements.</p> <p>Recommended waste code: 07 02 13 wastes of plastics.</p>
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#### SECTION 14: TRANSPORT INFORMATION

<b>14.1. ONU number</b>	3314
<b>14.2. Correct determination of ONU for sending</b>	MOULDINGS PLASTIC MATERIAL in the form of paste, foil or extruded cable, releasing flammable vapors
<b>14.3. Class (classes) of hazard for transportation</b>	9
<b>14.4. Packaging group</b>	III
<b>14.5. Environmental dangers</b>	NA
<b>14.6 Special precautions for users.</b>	
Hazard identification number	90
Label	NA
Restriction code in tunnels	D/E - Note: requirement only ADR
	<div style="border: 2px solid black; padding: 10px; text-align: center;"> <div style="background-color: orange; width: 100px; height: 40px; margin: 0 auto; line-height: 40px; font-size: 24px; font-weight: bold;">90</div> <div style="background-color: orange; width: 100px; height: 40px; margin: 0 auto; line-height: 40px; font-size: 24px; font-weight: bold;">3314</div> </div>
<b>14.7. Transportation in bulk according to Anex II of the MARPOL convention and IBC code</b>	Not applicable.

#### SECTION 15 : REGULATORY INFORMATION

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

#### SECTION 16 : OTHER INFORMATION

<b>16.1. Clear evidence of information having been added, deleted or revised</b>	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.
<b>16.2. Legend of abbreviations and acronyms which could be used in this datasheet</b>	



CLP

Regulations regarding Classification, Labelling, Packaging.

ADR

European treaty regarding international transportation of dangerous goods on roads.

### 16.3. Written references /sources

- Regulation (EC)1272/2008 regarding classification, labeling and packaging of substances
- European Agreement concerning the international carriage of dangerous goods (ADR)
- SC Rompetrol Rafinare S.A Specialized Internal Documents and Specific Literature

### 16.4. List of relevant hazard statements (H) and precautionary statements (P)

#### Hazard Statements (H) Precautionary statements (P)

- H 228:** Flammable solid  
**P210:** Keep away from heat /sparks/open flames /hot surfaces  
**P 240:** Ground/bond container and receiving equipment.  
**P 241:** Use explosion-proof electrical / ventilating / lighting / flameproof equipment.  
**P 280 :** Wear protective gloves/protective clothing/eye protection/face protection.  
**P370 +378:** In case of fire use powder, CO<sub>2</sub>, spray water to extinguish.

### 16.5. Specialist instruction recommendations

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

#### Note :

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