
 <p>National Petrochemical Company(NPC)</p>	Material Safety Data Sheet (MSDS) <small>According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1</small>	Page: 1 of 8 Revision Number: 1
	Product Name: <p style="text-align: center;">HDPE High Density Polyethylene</p>	 <p style="text-align: center;">Reactivity Flammability Health</p>

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING



Identification of the substance or preparation:	High Density Polyethylene
Country of origin:	Iran (Islamic Republic of Iran)
CAS Number:	9002-88-4
Synonyms:	HDPE, PE-HD
Company/undertaking identification	National Petrochemical Company Iran Petrochemical Commercial Company (IPCC)
Manufacturer subcontractor:	None
Emergency phone number:	00982188881735
Contact email:	msds@petrochem-ir.net
Fax:	00982188839511
Association/Organization:	None
Use of the Substance / Preparation:	Plastic bottle, Corrosion Resistant pipe and tubing, cable coating, Blow molded packaging, medical packing, adhesive ...

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:	Not applicable, Inert substance.
Hazardous label(s):	This product is not hazardous
Toxicological characteristics:	This product is not toxic.
Substances present at a concentration below the minimum danger:	Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring to report in this section, in accordance with EU or national regulations.
Other component:	None

3. IDENTIFICATION OF HAZARDS

Risk phrases:	Stable product. It doesn't offer hazard in its normal handling and storage state.
Skin contact:	Negligible hazard at ambient temperatures (-18 to +38 degrees C; 0 to 100 degrees F). Exposure to hot material may cause thermal burns.
Eye contact:	Particulates may scratch eye surfaces / cause mechanical irritation.

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Inhalation :

Dust may cause mechanical irritation.
Negligible hazard at ambient temperature
(-18 to 38 Deg C; 0 to 100 Deg F) Vapors
and/or aerosols which may be formed at
elevated temperatures may be irritating to
eyes and respiratory tract.

If swallowed:

Minimal toxicity.

Other information:

Product not classified as hazardous by
UNO.

4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor

NEVER induce swallowing in an unconscious person.

Skin contact :

Wash skin with soap and water.
For hot product, immediately immerse in
or flush the affected area with large
amounts of cold water to dissipate heat.
Cover with clean cotton sheeting or gauze
and get prompt medical attention.
No attempt should be made to remove
material from skin or to remove
contaminated clothing, as the damaged
flesh can be easily torn.

In case of exposure by inhalation:

In case of adverse exposure to vapors
and/or aerosols formed at elevated
temperatures, immediately remove
the affected victim from exposure.
Administer artificial respiration if
breathing is stopped. Keep at rest.
Call for prompt medical attention.

In case of splashes or contact with eyes:

This product is an inert solid. If in eye,
remove as one would any foreign object.
Rinse with plenty of running water. Obtain
medical attention if symptoms occur.



In case of swallowing:

There is no known acute effect after over-
exposure to this product.

Note of physician:

If swallowed, rinse mouth with water (only
if the person is conscious). Obtain medical
attention if symptoms occur.

Do not induce vomiting.

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5. FIRE FIGHTING MEASURES

Flammable class:

Flammability Risk 1 (Slight)

Suitable extinguishing media:

Use water spray to cool fire exposed surfaces, protect personnel, and extinguish the fire. For small fire, use dry chemical or CO₂. For large fire, Use dry chemical powder or alcohol-resistant foam.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, and Organic acids.

Special protective equipment for fire fighting :

Respiratory and eye protection required for fire fighting personnel.

Other information:

Solid material, may burn at or above the flashpoint, and airborne dust may explode if ignited. If thermally decomposed, flammable/toxic gases may be released. Toxic gases will form upon combustion. Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid creating dusty conditions and prevent wind dispersal. Use suitable protective equipment .Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. No special measures required.

Environmental precautions:



Methods for cleaning up and disposal:

Small spill and leak - Vacuum or sweep up material and place in a designated labelled waste container. Clean up affected area with a large amount of water.

Large spill and leak - Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Other information:

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Recover the spilled material and place in suitable containers

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for recycle or disposal.

7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled	
Handling:	Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid creating dusty conditions and prevent wind dispersal. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.
Storage:	Store in a fireproof location. Keep away from incompatible materials and avoid specific conditions. Containers should be grounded. Take precautionary measures against electrostatic discharges. Do not stack more than 2 pallets high in connection with risk of falling over. Do not stack pallets with grades containing slip or Anti-Block (AB) additives. Protect from (sun) light. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:	5 mg/m ³ (respirable dust), and 10 mg/m ³ (total inhalable dust) based on the OSHA PEL for nuisance dust. The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. NPC recommends that the lower exposure levels be observed as reasonable worker protection.
Exposure controls:	Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit.
Personal protective equipment:	For open systems at ambient temperature (-18 to 38 degrees C) where contact is likely, wear safety glasses with side shields. Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and



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Health

Eye protection:

Respiratory protection:

Hand protection:

Skin and body protection:

Health measures:

Environmental exposure controls:

a face shield.

Safety glasses with side shields.

Wear dust protection mask P2.

When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product.

Working clothes.

Not available

Plastic pellets are defined as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

Appearance (at 20°C):

Colour:

Odour:

PH (at 20°C):

Freezing /Melting point (°C):

Boiling point/range (°C):

Flash point (°C):

Flammability:

Auto-ignition temperature:

Explosive properties:

Oxidising properties:

Vapour pressure (at 20°C):

Density (at 20°C):

Solubility (at 20°C):

Viscosity (40°C):

Evaporation rate:

Other information:

None

Solid. (Granular solid. Powder.)

Off-white.

Wax-like when heated

Not applicable.

125-145

Decomposes. >300 °C

>343 °C

Flammability Risk 1 (Slight)

> 330 °C

None

None

Not available

0.941 to 0.97 g/cm³

water solubility: Insoluble in cold water

solubility in fats: Insoluble

Not applicable

Not applicable

Insoluble in almost all solvents at room temperature; soluble in many organic solvents above 93 deg C; may "swell" by absorption of solvents below 60 deg C

10. STABILITY AND REACTIVITY

Stability:

Conditions to avoid:

Stable under recommended storage and handling conditions

Temperatures over 650 F (343 C) will lead to resin degradation and decomposition. Keep



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Material to avoid:

Hazardous decomposition products:

away from heat, sparks and flame and exposure to (sun) light. Prevent formation of dust clouds. Take measures against static discharge. Avoid storage or contact with strong oxidizing agents.

Fluorine Strong Oxidizing agents.

Highly dependent on temperature and environmental conditions, a variety of decomposition products may be formed, such as low molecular weight hydrocarbons and hydrocarbon oxidation products (acids, ketons, and aldehydes). Also thermal decomposition under condition of limited oxygen supply will give rise to carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

- LD₅₀, oral, rat (mg.kg⁻¹): >5000 mg/kg
- LD₅₀, oral, mouse (mg.kg⁻¹): Not Available
- LD₅₀, dermal (mg.kg⁻¹): Not Available

Sub chronic – chronic toxicity:

None

Sensibilization:

Not available

Carcinogenicity:

Carcinogenic effects are not known.

Reproductive effects:

Reproductive effects are not known.

Human experience:

Not available

Other information:

During heating and processing of the material small amounts of free monomer may evaporate resulting in airborne concentration that may cause irritating effects of the respiratory tract and nausea.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

No specific ecological data are available for this product.

Bioaccumulative potential:

Effects on nature due to bioaccumulation are not known.

Mobility:



No specific ecological data are available for this product.

Persistence and degradability:

No specific ecological data are available for this product.

Other adverse effects:

No specific ecological data are available for this product.

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13. DISPOSAL CONSIDERATIONS

Disposal of product: Disposal of packaging:	Waste must be disposed of in accordance with national and local environmental regulations. Polyethylene bags should be reused in the working area, products transportation or recycled by specialized companies.
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14. TRANSPORT INFORMATION



Land transport: ADR/RID: Packaging group: Maritime transport: Air transport:	Not established Not established Not applicable Not applicable Not applicable
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15. REGULATORY INFORMATION

Hazardous label(s): Safety phrases: Risk phrases:	<table> <tr> <th colspan="3" style="text-align: center;">NPCA-HMIS - NFPA - KEY</th> </tr> <tr> <td>HEALTH</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1 4=Severe</td> </tr> <tr> <td>FLAMMABILITY</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1 3=Serious</td> </tr> <tr> <td>REACTIVITY</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0 2=Moderate</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">1=Slight</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">0=Minimal</td> </tr> </table> This product is not hazardous This product is not hazardous	NPCA-HMIS - NFPA - KEY			HEALTH	1	1 4=Severe	FLAMMABILITY	1	1 3=Serious	REACTIVITY	0	0 2=Moderate			1 =Slight			0 =Minimal
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16. OTHER INFORMATION

None

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The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC

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