
 National Petrochemical Company(NPC)	Material Safety Data Sheet (MSDS) According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1	Page: 1 of 7 Revision Number: 1
	Product Name: HIPS (High Impact polystyrene)	 Reactivity Flammability Health

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



Identification of the substance or preparation: Country of origin: CAS Number: Synonyms:	HIPS (High Impact Polystyrene) Iran (Islamic Republic of Iran) 9003-55-8 High Impact Polystyrene Polystyrene Impact polystyrene Polystyrene with 1,3- Butadiene
Company/undertaking identification	National Petrochemical Company Iran Petrochemical Commercial Company (IPCC)
Manufacturer subcontractor: Emergency phone number: Contact email: Fax: Association/Organization: Use of the substance/Preparation:	None 00982188881735 msds@petrochem-ir.net 00982188839511 None

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances: Hazardous label(s): Toxicological characteristics: Substances present at a concentration below the minimum danger: Other component:	Not classified as hazardous to health Not classified as a hazardous material Not classified as a toxic material Monomer styrene must be less than 1000ppm 1,3 Butadiene polymer Contains no hazardous ingredients :EC directive 2001/58/EC
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3. IDENTIFICATION OF HAZARDS

Risk phrases: Skin contact: Eye contact: Inhalation If swallowed:	Not classified as dangerous for supply/use (directive 67/548/EEC & directive 1999/45/EEC). Dust may cause irritation. Physical injury only. Dust may cause irritation. Dust may cause irritation to respiratory tract and cause nose and throat. No adverse effects anticipated by this route of exposure incidental to proper industrial handling. Consult a doctor.
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Others

Melt of HIPS can cause severe burns.
 Danger of dust explosion in fine dusty form or when ground to a small particle size.
 Small particle harmful for adequate and terrestrial organisms.
 An eye wash fountain safety shower and general washing facility must be available to work area.

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.

In case of exposure by inhalation:

Remove from exposure immediately to fresh air.

Performing artificial respiration.

If any effects occur consult a doctor.

In case of splashes or contact with eyes:

Flash with plenty of water. Remove eye lenses continue. Flashing. Continue flashing.

If any effects occur consult a doctor.

In case of swallowing:

Do not induce vomiting If any effects occur consult a doctor Provided the patient is conscious. Wash out mouth with water and give 200-300 ml of water to drink.

Note of physician:

Skin contact

Essentially no irritation and adverse effects on skin .Prolonged contact can lead to skin irritations. Physical injury only.

Molten product can cause thermal burns. Do not try to peel molten polymer from the skin. Cool rapidly with water

Other information

An eye wash fountain safety shower and general washing facility must be available to work area. .

5. FIRE FIGHTING MEASURES

Flammable class:

Product is not classified as flammable, but it will burn with flame and at high temperature.



Dense smoke is produced when product burns.

Suitable extinguishing media:

Water spray, Dry chemical powder, Carbon dioxide, Fog or foam. Sand or soil may be used for small fires only.

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

Dense smoke is produced when product burns. The smoke may contain many toxic /irritating compounds such as carbon mono oxide carbon dioxide and styrene. Evacuate the people and isolate the fire area .Don't entire without any necessity.

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Special protective equipment for fire fighting :

Wear positive pressure self-contained breathing apparatus (SCBA) and fire fighting clothing (helmet, pants, boots, gloves ...).

Other information:

Handling may produce flammable explosive dusts ventilate the area and clean accumulate dusts.

In case of large fire doesn't use directly jet water.

Water may cause extensive scattering of molten material. Cool containers by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Collect spilled material and protect people from slipping hazards. After cleaning it can be used.

Environmental precautions:

Keep out of water ditches, sewers and water supplies. Clean up them to prevent contamination.

Methods for cleaning up and disposal:

Sweep up small spillage
Vacuum equipment can be used for large spilt materials.

Other information:

Contaminated area must be isolated.

7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled

Handling:



Handling may produce flammable explosive dusts ventilate the area and clean accumulate dusts. Use non-sparking hand tools and explosion proof electrical equipment. Housekeeping conditions and controlling dusts should consider for safe handling.

Avoid flame, sparks and static.

Storage:

Store in a dry place and suitable temperature (ambient temperature).

Keep container tightly closed. Keep away from heat, ignition sources and direct sunlight.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:	Wear suitable protective clothing, shoes and other equipment. No occupational exposure limit assigned. Dust : LTEL (4 at 8 hour TWA mg/m3)
Exposure controls:	-
Personal protective equipment:	In dusty workplace use an approved mask or dust respirator
Eye protection:	Safety goggles
Respiratory protection:	Avoid inhalation of vapors
Hand protection:	Wear gloves protect physical injury (PVC)
Skin and body protection:	Wear approved clothing for working and handling.
Health measures:	Local exhaust ventilations may be necessary for some operations.
Environmental exposure controls:	Not assigned. Styrene monomer: OSHA - TWA 100 PPM :CLV 200 PPM : Max. conc. 600ppm :ACGIH TWA 20PPM: STEL 40PPM

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:	Solid pellets
Appearance (at 20°C):	Colorless & opaque
Colour:	White
Odour:	Faint odour
PH (at 20°C):	Not applicable (nearly 7)
Softening point (°C):	94 - 107 C
Melting point (°C):	93-107.5 C
Flash point (°C):	
Flammability:	Combustible UEL: Not applicable LEL: Not applicable
Auto-ignition temperature:	
Explosive properties:	Not applicable
Oxidising properties:	Not applicable
Vapour pressure (at 20°C):	Not applicable
Density (at 20°C):	1.04 g/cm3
Solubility (at 20°C):	insolubility: water
	solubility: Aromatic Solvents & Chlorinated Hydrocarbons
Molecular Weight :	
Viscosity (40°C):	Not applicable

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Evaporation rate:	Not applicable
Molecular Formula	(C ₈ H ₈ .C ₄ H ₆)X
Other information:	STYRENE MONOMER RESIDUAL : MAX=500 PPM

10. STABILITY AND REACTIVITY



Stability: Hazardous polymerization Conditions to avoid:	Stable at normal temperature and pressure. Will not occur Heat, flames, sparks statistics and other sources of ignition. Avoid contact with incompatible materials.
Material to avoid: Hazardous decomposition products:	strong oxidizing materials Thermal decomposition products: Thermal decomposition products: styrene monomer, butadiene, carbon monoxide, aldehydes and organic acids may be formed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	- LD ₅₀ , oral, rat (mg.kg ⁻¹): Not available - LD ₅₀ , oral, mouse (mg.kg ⁻¹): Not available - LD ₅₀ , dermal (mg.kg ⁻¹): Not available
Sub chronic – chronic toxicity:	No relevant information found
Sensibilization:	No relevant information found
Carcinogenicity:	No relevant information found
Reproductive effects:	No relevant information found
Human experience:	No relevant information found
Other information:	Carcinogen status: -

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Not expected to be acutely toxic. But it is harmful if ingested by animals and aquatic life.
Bio accumulative potential:	Because of high molecular weight and hard decomposition will remain in the soil and sink in the water .accumulation and sedimentation will occur.
Mobility:	-
Persistence and degradability:	Sun light may cause surface degradation .It is expected to be inert in the environment and not to biodegrade.
Other adverse effects:	-

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13. DISPOSAL CONSIDERATIONS

Disposal of product:	Disposal must be done as territory and /or local government regulations. It can be recycled /reclaimed or burned in an incinerator. Waste management information will help to receive the best results.
Disposal of packaging:	It can be recycled /reclaimed or burned in an incinerator Waste management information will help to receive the best results.

14. TRANSPORT INFORMATION



Transportation:	This product is not classified as a dangerous good. It can burn.
Land transport:	NO classification assigned.
ADR/RID:	NO classification assigned.
Packaging group:	NO classification assigned.
Maritime transport:	NO classification assigned.
Air transport:	NO classification assigned.

15. REGULATORY INFORMATION

Hazardous label(s):	No regularity known
Safety phrases:	This product is not classified as a dangerous good. It can burn.
Risk phrases:	This product is not classified as a dangerous good. It can burn.

16. OTHER INFORMATION

STYRENE MONOMER RESIDUAL MAX=500 PPM

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

Disclaimer of liability:

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