
 <p>National Petrochemical Company(NPC)</p>	<h2>Material Safety Data Sheet (MSDS)</h2> <p>According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1</p>	Page: 1 of 7 Revision Number: 1
	Product Name: <h3>GPPS</h3> <p>(General Purpose Polystyrene)</p>	 <p>Reactivity Flammability Health</p>

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



Identification of the substance or preparation:	GPPS (General Purpose Polystyrene)
Country of origin:	Iran (Islamic Republic of Iran)
CAS Number:	9003-53-6
Synonyms:	Polystyrene, Styrene homopolymer
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:	

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:	Not classified as hazardous material.
Hazardous label(s):	Not classified as a hazardous material
Toxicological characteristics:	Not classified as a toxic material
Substances present at a concentration below the minimum danger:	Monomer styrene must be less than 500 PPM.
Other component:	Mineral Oil. Contains no hazardous ingredients :EC directive 2001/58/EC

3. IDENTIFICATION OF HAZARDS

Skin contact:	Essentially no irritation and adverse effects on skin .Physical injury only. Dust may cause irritation.
Eye contact:	Dust may cause irritation to eyes.
Inhalation	Dust may cause irritation to respiratory tract and cause nose and throat.
If swallowed:	No adverse effects anticipated by this route of exposure incidental to proper industrial handling. Consult a doctor. Melt of GPPS 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.

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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 and continue flashing. If any effects occur consult a doctor
In case of swallowing: Note of physician:	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.
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 MEASURS

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.
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.

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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 may produce flammable explosive dusts ventilate the area and clean accumulate dusts. Use non-sparking hand tools and explosion proof electrical equipment.
Handling:	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.

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.

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Respiratory protection: Hand protection: Skin and body protection: Health measures: Environmental exposure controls:	Use approved dust mask or organic vapor respirator if exposure to levels above the occupational exposure limit is likely. Wear gloves protect physical injury (PVC). Wear approved clothing for working and handling. Local exhaust ventilations may be necessary for some operations. Not assigned. Styrene monomer: OSHA - TWA 100 PPM :CLV 200 PPM : Max. conc. 600ppm :ACGIH TWA 20PPM: STEL 40
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9. PHYSICAL AND CHEMICAL PROPERTIES

General information: Appearance (at 20°C): Colour: Odour: PH (at 20°C): Softening point (°C): Melting point (°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): Molecular Weight : Viscosity (40°C): Evaporation rate: Molecular Formula Other information:	Solid pellets Granules Off-white Odourless Not applicable (nearly 7) 85 - 105 > 350 Combustible UEL: Not applicable LEL: Not applicable 490 C Not applicable Not applicable Not applicable 1.02-1.05g/cm3 insolubility: water solubility: Aromatic Solvents + Chlorinated Hydrocarbons usual organic solvents Not applicable Not applicable STYRENE MONOMER RESIDUAL : MAX=500 PPM
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10. STABILITY AND REACTIVITY

Stability:
Hazardous polymerization
Conditions to avoid:

Stable under normal condition.
 Will not occur

Heat, flames, sparks statistics and other sources of ignition. Avoid contact with incompatible materials.

Material to avoid:

strong oxidizing materials, aromatic solvents, chlorinated hydrocarbons

Hazardous decomposition products:

Thermal decomposition products: styrene monomer, carbon monoxides, aldehydes, cyclic low molecular oligomers.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

- LD₅₀, oral, rat (mg.kg⁻¹): Not available
 - LD₅₀, oral, mouse (mg.kg⁻¹): Not available
 - LD₅₀, 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:

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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

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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

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

Disclaimer of liability:

The information in this MSDS was obtained from different sources, which National Petrochemical Company (NPC) and Iran Petrochemical Commercial Company (IPCC) believe, are reliable. However, the

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