## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Trade Names:** Total Impact Polystyrene
**Common Names/Synonyms:** Polystyrene, HIPS, MIPS
**Product Use:** Flooring tray
**Manufacturer:** Total, P O Box 674411, Houston,TX 77267-4411
**Telephone:** (800) 322-3462 | FAX: 713-483-5293 | **Emergency Number:** (800) 424-9300 (Chemtrec)

## SECTION 2 – COMPOSITION AND INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | % by Wt | Exposure Limits |
|---|---|---|---|
| Polystyrene (Impact) | 9003-55-8 | 100 | Not available. |

## SECTION 3 – HAZARDS IDENTIFICATION

**Physical State and Appearance** Solid pellets

**Emergency Overview** Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns.

**Routes of Entry** FOR HOT MATERIAL: Skin contact. Eye contact. Inhalation

**Potential Acute Health Effects**

***Eyes*** This product is not known to cause eye irritation. However, as with any chemical, some sensitive individuals may experience eye irritation upon contact.

***Heated Polymer*** Eye contact can cause serious thermal bums.Vapors formed when polymer is heated may be irritating to the eye.

***Skin*** No known acute effects of this product resulting from skin contact. However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum.

***Inhalation*** Negligible at room temperature. Nuisance dusts can be irritating to the upper respiratory tract. Irritating vapors may form when the polymer is processed at high temperatures.

***Ingestion*** No effects are expected for ingestion of small amounts.

**Potential Chronic Health Effects** **CARCINOGENIC EFFECTS:** Classified NONE by NTP. None by OSHA. 3 (Not classifiable for human) by IARC. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available

**Medical Condition Aggravated** There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.

**Overexposure Signs/Symptoms** Not available. (See Toxicological Information-Section 11)

## SECTION 4 – FIRST AID PROCEDURES

**Inhalation:** Allow the victim to rest in a well ventilated area.

**Eye:** Rinse with water for a few minutes. Seek medical attention if necessary.

**Skin:** *Polymer:* NO known EFFECT on skin contact, rinse with water for few minutes. *Heated Polymer:* For serious burns from heated polymer get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water.

**Ingestion:** No First Aid procedures are needed.

**Notes to Physician:** Not available.

## SECTION 5 – FIRE FIGHTING MEASURES

**Flammability of the Product:** May be combustible at high temperature
**Auto-ignitionTemperature:** 440°C (824°F) **Flashpoint:** >392°F (200°C)
**Flammable Limits:** Not available **Products of Combustion:** Carbon oxides (CO, CO2), soot
**Fire Hazards in Presence of Various Substances:** No specific information is available
**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: *Not expected*. Risks of explosion of the product in pres ence of static discharge: *Possible.* No specific information is available in our database.
**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical extinguisher (ABC or BC) $C^{O}2$, or water spray.
LARGE FIRE: Use water spray, fog or foam.
DO NOT use water jet.
**Protective Clothing (Fire):** Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.
Special Remarks on Fire Hazards: Fire may produce irritating gases and dense smoke.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Small Spill and Leak:** Pellets on the floor could present serious slipping problem. Good housekeeping must be maintained at all times to avoid this hazard. Sweep, shovel or vacuum material into clean containers.
**Large Spill and Leak:** Use a shovel to put the material into a convenient waste disposal container. Do not allow any potentially contaminated water with pellets to enter any waterway, sewer or drain.

## SECTION 7 – HANDLING AND STORAGE

**Handling:** Handling of plastic may form nuisance dust. Protect personnel.
**Storage:** Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
**Personal Protection:**
***Eyes:*** Safety glasses
***Body:*** Coveralls
***Respiratory:*** Ventilation is normally required when handling this product at higher temperatures. Wear appropriate respirator when ventilation is inadequate.
***Hands:*** Thermally insulated gloves required when handling hot material
***Feet:*** Safety slip proof shoes in areas where spills or leaks can occur.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Physical State / Appearance:** Solid Pellets
**Molecular Weight:** Not available
**Melting/Freezing Point:** >132.22°C( 270°F)
**Specific Gravity:** 1.04( Water= 1)
**VOC:** 0 (%)
**Solubility in Water:** insolubility in Water
**Odor:** Odorless
**Color:** Polystyrene is translucent
**Molecular Formula:** (-CH(C6H5)-CH2-)-x(-CH2-CH=CH-CH2-)y

## SECTION 10 – STABILITY AND REACTIVITY

**Stability and Reactivity:** The product is stable. Avoid Temperatures of 600”F or above.
**Conditions of Instability:** No additional remark.
**Incompatibility:** Reactive with strong oxidizing agents.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Toxicity to Animals:** LD50: Not available. LC50: Not available.
**Chronic Effects on Humans:** CARCINOGENIC EFFECTS: Classified None by NTP, None by OSHA. 3 (Not classifiable for human.) by IARC.
**Other Toxic Effect:** Not considered to be dangerous for humans.
**Hazardous Decomposition:** Hazardous decomposition products are carbon monoxide, carbon dioxide, dense smoke, and various hydrocarbons. Exposure of polystyrene to extremely high temperatures (600° F or higher) may cause partial decomposition. Chemicals that may be released include styrene monomer, benzene, and other hydrocarbons.
**Hazardous Polymerization:** No.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity:** Not available.
**BOD5 and COD:** Not available.
**Biodegradable/OECD:** Not available.
**Mobility:** Not available.
**Toxicity of the Products:** Not available.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Information:** Transfer to an approved disposal area in accordance with federal, state, and local regulations.
**Waste Stream:** Not available. ***Consult your local or regional authorities.***

## SECTION 14 – TRANSPORT INFORMATION (for bulk shipments, non-bulk shipments may differ)

**COT Classification:** Not a DOT controlled material (United States)
**DOT Proper Shipping Name:** Not available
**UN Number:** Not established
**Packing Group:** Not available
**USCG Proper Shipping Name:** Not available
**TDG Classification:** Not controlled under TDG (Canada)
**ADR/RID Classification:** Not controlled under ADR (Europe)
**IMO/IMDG Classification:** Not controlled under IMDG
**ICAO/IATA Classification:** Not controlled under IATA

## SECTION 15 – REGULATORY INFORMATION

**HCS Classification:** Product is not a "Hazardous Chemical" as defined by OSHA HCS 29 CFR 1910.1200

**U.S. Federal Regulations:** TSCA inventory: **Polystyrene** (Impact)
SARA 313 toxic chemical notification and release reporting:No products were found.
Clean water act (CWA)307:No products were found
Clean water act (CWA)311: No products were found
Clean air act (CAA)112 accidental release prevention: No products were found
Clean air act ( CAA)112 regulated flammable substances: No products were found
Clean air act (CAA)112 regulated toxic substances: No products were found

**International Regulations:**
***WHMIS (Canada):*** Not controlled under WHMIS (Canada).
CEPA DSL: Polystyrene (Impact)
***EINECS:*** Not available.
***DSCL (EEC):*** Not controlled under DSCL( Europe).
***International Lists:*** No products were found.

**State Regulations:** No products were found.
California prop.65: There are no Proposition 65 chemicals present in our polystyrene resins at levels that would require a warning under the Califomia Safe Drinking Water and Toxic Enforcement Act.

## SECTION 16 – OTHER INFORMATION

**Label Requirements:** Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns.

**References:** -HSDB- Hazardous Substances Data Bank
-RTECS- Registry of Toxic Effects of Chemicals Substances.

**Other Considerations:** This product is made for industrial purposes only. Acceptable business/technical terms necessary for medical device applications must be developed by contacting your Total Petrochemicals Inc. sales representative. Without such documented business terms, Total Petrochemicals Inc. makes no representations, and disclaims all warranties express or implied, concerning biocompatibility and/or suitability of this product for medical device applications.

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