

MATERIAL SAFETY DATA SHEET

HIPS

FILE NO.: 998
MSDS DATE: 1/1/2017

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HIPS
SYNONYMS: HIPS Plastic, High Impact Polystyrene

MANUFACTURER: M2 Materials
ADDRESS: 10 Benham St.
Medford, MA 02155

EMERGENCY PHONE: 617-475-0266
COUNTRY CODE: 001

CHEMICAL NAME: Polystyrene

PRODUCT USE: May be used to produce molded or extruded articles or as a component of other industrial products

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
009003-55-8	>97	NA	No known toxic chemical requirements
NA	<3	NA	No known toxic chemical requirements

requirements ppm mg/m3

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Filament plastic with slight odor. Small pieces could pose choking hazard or slipping hazard. Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns and fumes produced during melt processing may cause eye, skin and respiratory tract irritation. Secondary operations, such as grinding, sanding, or sawing, can produce dust which may present a respiratory hazard. Product in filament is unlikely to cause irritation.

ROUTES OF ENTRY: Mouth, Skin

POTENTIAL HEALTH EFFECTS

EYES: irritant

SKIN: irritant

INGESTION: irritant

INHALATION: irritant

ACUTE HEALTH HAZARDS:

CHRONIC HEALTH HAZARDS: None of the components present in this material are listed by IARC, NTP, OSHA, or ACGIA as a carcinogen.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: allergies

CARCINOGENICITY

OSHA: none

ACGIH: none

NTP: none

IARC: none

OTHER:

SECTION 3 NOTES:

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SECTION 4: FIRST AID MEASURES

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EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Call a Physician.

SKIN: The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. If molten polymer gets on skin, cool rapidly with cold water, do not attempt to peel polymer from skin, Obtain medical treatment for thermal burn.

INGESTION: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary

INHALATION: No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion, remove yourself to fresh air. Consult a physician if symptoms persist.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FIRE FIGHTING: Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus and protective fire fighting clothing

EXTINGUISHING MEDIA: Water (mist or light spray at first), Foam, Dry chemical, CO2

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous gases/vapors produced in fire are: phenolic compounds, nitrogen oxide, hydrogen bromide, carbon monoxide, small amounts of hydrogen cyanide and styrene.

FLASH POINT: >404°C (759°) Estimated

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Review FIRE FIGHTING MEASURES and HANDLING sections.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT sections.

STORAGE: Store in a cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local ventilation to control fumes from hot processing

VENTILATION: Adequate ventilation should be used at all times to reduce the fumes (VOC's), especially when heated.

RESPIRATORY PROTECTION: A NOISH/MSHA approved air purifying respirator with an organic vapor cartridge equipped with a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

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EYE PROTECTION: Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material. A full face mask respirator provides protection from eye irritation.

SKIN PROTECTION: If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Plastic Filament

ODOR: Possibly slight organic odor

PHYSICAL STATE: Solid

MELTING POINT:

F: 212

C: 100

SPECIFIC GRAVITY (H₂O = 1): >1.02

@

F: RT

C: RT

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: Insoluble

PERCENT SOLIDS BY WEIGHT: 100

PERCENT VOLATILE: Not Determined
BY WT/ BY VOL @

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABLE

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): Exposure to open flame or temperatures >530°F for prolonged time

INCOMPATIBILITY (MATERIAL TO AVOID): Other materials

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

Hazardous gases or vapors can be released, including phenolic compounds, nitrogen oxide, hydrogen bromide, carbon monoxide, hydrogen cyanide and styrene.

HAZARDOUS POLYMERIZATION: Polymerization will not occur

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: No information is available. Toxicity is expected to be low based on insolubility in water

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information is available. Toxicity is expected to be low based on insolubility in water

SECTION 12 NOTES:

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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Preferred options for disposal are 1.) recycle 2.) incineration with energy recovery 3.) landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transpoting, and disposal must be in accordance with applicable federal state/province, and local regulations.

RCRA HAZARD CLASS:

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: Not Regulated

PROPER SHIPPING NAME:

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENT:

WATER TRANSPORTATION: Not Regulated

PROPER SHIPPING NAME:

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

AIR TRANSPORTATION: Not Regulated

PROPER SHIPPING NAME:

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

OTHER AGENCIES:

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): In compliance with TSCA Inventory requirements for commercial purposes

WHMIS: Not a controlled product

SECTION 15 NOTES:

This product does not contain reportable quantities of substances subject to supplier notification

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

Medical Use: Do not use in medical applications involving permanent implantation in the human body

DISCLAIMER: USER RESPONSIBILITY: Each user should read and understand this information and incorporate it into individual site safety programs in accordance with applicable hazard communication standards and regulations.