



MATERIAL SAFETY DATA SHEET

HIPS RESIN
GRADE : HIPS PH1000

1. IDENTIFICATION

PRODCUT NAME:	HIPS PH1000
PRODUCT DISCRIPTION:	HIPS (BUTADIENE-STYRENE POLYMER)
PRODUCT USAGE:	MAY BE USED TO PRODUCE MOLDED OR EXTRUDED ARTICLES OR AS A COMPONENTS OF OTHER INDUSTRIAL PRODUCTS.
MANUFACTURER'S NAME:	POLYMERTECH CO., LTD.
MANUFACTURER INFORMATION:	42-5, Sinjang 6-gil, jangchenon-myeon, Gumi-si KYUNG SANG BUK-DO, KOREA TEL : 054-472-0431 FAX : 054-472-0432

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	%
HIPS RESIN (Butadiene-styrene polymers)	9003-53-6	95~100
OTHERS(ADDITIVES)	-	0 ~ 5

3. HAZARDS IDENTIFICATION

<p>NFPA RATINGS (SCALE 0-4) : HEALTH=1 FIRE=1 REACTIVITY=0</p> <p>EC CLASSIFICATION (CALCULATED) : No classification assigned.</p> <p>EMERGENCY OVERVIEWS :</p> <p>Solid pellets with slight or no odor. Spilled pellets create slipping hazard.</p> <p>Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns.</p> <p>Fumes produced during melt processing may cause eye, skin and respiratory tract irritation.</p> <p>Secondary operations, such as grinding, sanding or sawing, can producs dust which may present an explosion or respiratory hazard.</p> <p>POTENTIAL HEALTH EFFECTS :</p>	
EYE :	Product may cause irritation or injury due to mechanical action.
SKIN :	Pellets not likely to cause skin irritation.
INGESTIO :	Not acutely toxic.
INHALATIO:	Pellet inhalation unlikely due to physical form.
CHRONIC / CARCINOGENICITY :	
NTP :	Not Tested
OSHA :	Not Regulate
IARC :	Not Listed

4. FIRST AID MEASURES

MEDICAL RESTRICTIONS :	
EYE :	Remove contact lenses at once. Immediately flush eyes well with copious quantities of water or normal saline for at least 15-20 minutes. If irritation persists, seek medical attention.
SKIN :	seek medical attention if rash or burn occurs.
INGESTIO :	Not probable. If a large amount is swallowed, seek medical attention.
INHALATIO:	Not Likely to be inhaled due to physical form.
MELT PROCESSING :	
For molten plastic skin contact, cool rapidly flush water and immediately seek medical attention. Do not attempt removal of plastic without medical assistance. Do not use solvent for removal. For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop seek medical attention at once, even if symptoms develop at a later time. For skin contact with fume condensate, immediately wash thoroughly with soap and water. If irritation develops seek medical attention.	

5. FIRE FIGHTING MEASURES

FIRE FIGHTING : Approved pressure demand breathing apparatus and protective clothing should be used for all fires. Water spray is the preferred extinguishing medium. This product will melt but will not be carried on the surface for water.	
EXTINGUISHING MEDIA : Water spray and foam, Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.	
HAZARDOUS COMBUSTION PRODUCTS : Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, oxides of phosphorus, hydrogen cyanide, hydrocarbon fragments, hydrogen fluoride, carbonyl fluoride and fluorocarbon fragments.	
FLASH POINT :	Not Applicable
LOWER FLAMMABLE LIMIT :	Not Established
UPPER FLAMMABLE LIMIT :	Not Established
AUTOIGNITION :	Not Established
CONDITIONS OF FLAMMABIL:	Requires a continuous flame source to ignite and sustain combustion.
EXPLOSION DATA :	
IMPACT SENSITIVITY :	Not sensitive to mechanical impact.
STATIC DISCHARGE :	Not sensitive to static discharge. (See Section 7)

6. ACCIDENTAL RELEASE MEASURES

GENERAL : Sweep or gather up material and place in proper container for disposal or recovery. (See Section 13)
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7. HANDLING AND STORAGE

HANDLING :

Follow recommendations on label and in processing guide. Prevent contact with skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use aggressive housekeeping activities to prevent dust accumulation; employ bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.

STORAGE :

Store in a dry place away from moisture, excessive heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS :

A continuous supply of fresh air to the workplace together with removal of processing fumes through exhaust systems is recommended. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, duct work and other surfaces using appropriate personal protection. For powders and residual dusts refer to Section 7.

PERSONAL PROTECTION :

EYE/FACE :	Wear safety glasses with side shields or chemical goggles. In addition, use full face shield when cleaning processing fume condensates from hoods, ducts and other surfaces.
RESPIRATORY :	When handling fumes are not adequately controlled, use respirator approved for protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding, sanding or sawing, are not adequately controlled use respirator approved for protection from dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE :	Solid
COLOR AND APPEARANCE :	Plastic pellet with slight odor
BOILING POINT :	Not Applicable
MELTING POINT (°C) :	200~ 230
VAPOR PRESSURE (mm) :	Negligible
VAPOR DENSITY (Air=1) :	Not Applicable
SPECIFIC GRAVITY :	1.02 ~ 1.17 (water = 1)
WATER SOLUBILITY :	Insoluble
SOLVENT SOLUBILITY :	Slightly soluble in strong polar solvent or chlorinated solvents
% VOLATILES :	Negligible
pH :	Not Applicable
ODOR THRESHOLD :	Not Established
EVAPORATION RATE :	Negligible
COEFFICIENT WATER / OIL DISTRIBUTION: Not Established	
COMMENT	This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

10. STABILITY AND REACTIVITY

STABILITY :	Stable under recommended conditions of Section 7
REACTIVITY :	Not reactive under recommended conditions of handling, storage, processing and use.
CONDITIONS TO AVOID :	
Do not exceed melt temperature recommendations in product literature. In order to avoid autolgnition/hazardous decomposition of hot thick meases of plastic, purgings should be collected in small, flat shapes or thin strands to allow for rapid cooling and quenching in water. Do not allow product to remain in barrel at elevated temperatures for extended periods of time ; purge with a general purpose resin. (See Section 8 for respiratory protection advice)	
HAZARDOUS DECOMPOSITION :	
Major decomposition gases are oxidized hydrocarbons (probably carbon monoxide) and steam. Minor components in decomposition gas may be aldehyde, phenolic compounds, etc.	

11. TOXICOLOGICAL INFORMATION

Not Available

12. ECOLOGICAL INFORMATION

Not expected to present any significant ecological problems.
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13. DISPOSAL CONSIDERATIONS

RCRA HAZARDOUS WASTE :
Products is not a RCRA hazardous waste.
WASTE DISPOSAL :
Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

14. TRANSPORT INFORMATION

DOT HAZARD CLASS :	Not Regulated
PROPER SHIPPING NAME :	Not Regulated
IDENTIFICATION NUMBER :	Not Listed
TDGA :	Not Listed

15. REGULATORY INFORMATION

Listed below are chemical substances subject to supplier notification requirements.	
U.S. REQUATIONS :	
TSCA INVENTORY STATU:	This product complies with the Chemical Substance Inventory requirements of the US EPA TSCA.
CERCLA SECTION 103 (40CFR302 : Not Listed	
SARA SECTION 313 (40CFR372.65 : Not Listed	
SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21)	
ACUTE :	Not Listed
CHRONIC :	Not Listed
FIRE :	Not Listed
REACTIVE :	Not Listed
SUDDEN RELEASE:	Not Listed
STATE REQUATIONS :	
California Proposition 65 :	Not Listed
EUROPEAN REGULATIONS :	
EC NUMBER :	Not assigned

16. OTHER INFORMATION

The information submitted in this MSDS is based on our current knowledge and experience. Because it is not possible to anticipate all conditions of use additional safety precautions may be required, we make no warranty.

ABBREVIATIONS :

ACGIH :	American Conference of Governmental Industrial Hygienist
DOT :	Department of Transportation
EC : E	European Communities
EPA :	Environmental Protection Agency
IARC :	International Agency for Research on Cancer
NOISH :	National Institute for Occupational Safety and Health
NTP :	National Toxicology Program
OSHA :	Occupational Safety and Health Administration
RTECS :	Registry of Toxic Effects of Chemical Substances
CAS # :	Chemical Abstracts Service Number
RCRA :	Resource Conservation and Recovery Act