

# Mosaic HIPS

## Technical Data Sheet

Compatible with Element, Element HT & Array



### Description

Mosaic HIPS is a lightweight and durable material that prints easily with excellent surface quality. Additionally, HIPS can be used as a breakaway support material, or as a soluble support material when dissolved in d-limonene.

#### Key Features

- ✓ Lightweight
- ✓ Excellent Surface Quality
- ✓ Easy to Print
- ✓ Soluble (in d-limonene)
- ✓ Durable

#### Sample Applications

- ✓ Prototyping
- ✓ Packaging
- ✓ Cosmetic parts
- ✓ Breakaway and Double support

### Available Colours



Natural

### Filament Specifications

Diameter	Tolerance
1.75 mm	+/- 0.03 mm

## Printing Guidelines

<b>Slicer Profile</b>	Coming soon to canvas3d.io
<b>Nozzle Temperature</b>	230°C
<b>Heated Chamber</b>	Not Recommended
<b>Build Surface</b>	Element Bed Type I with glue stick
<b>Special Considerations</b>	HIPS can be used as a standalone material or as a breakaway support for select materials (see Multi-Material Compatibility)

## Storage/Handling Considerations

<b>Hygroscopicity</b>	Low
<b>Drying Temperature</b>	N/A
<b>Drying Time</b>	N/A

**Note:** When not in use, spool should be stored in a Mosaic Material Pod or inside a vacuum sealed container.

## Material Properties

<b>Property</b>	<b>Standard</b>	<b>Typical Value</b>
Density	ISO 1183	1.04 g/cc
Tensile Strength, Break	ISO 527	34.62 MPa
Tensile Modulus	ISO 527	1214 MPa
Elongation at Break	ISO 527	12.95%
Heat Deflection Temp.	ISO 75 0.45MPa	79.2°C

## Multi-Material Compatibility

### Automation

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Same-material Automated Changeover	With Material Pod
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### Supports

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Same-material support	Yes
Compatible Soluble Materials	None
Compatible Breakaway Materials	ABS, ASA, Nylon, Matrix*
Soluble with Water?	No
Soluble with d-limonene?	Yes

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**Note:** Using HIPS as a breakaway material for ABS and ASA is recommended, using it as a breakaway material for Nylon and Matrix is experimental and not tested in-depth.

# Mosaic HIPS

## Safety Data Sheet



### Section 1: Identification

#### Product Identification:

**Product Name:** HIPS  
**Chemical Name:** High Impact Polystyrene  
**Recommended Use:** Additive manufacturing

#### Supplier Information:

Mosaic Manufacturing  
403-111 Peter Street, Toronto, Ontario, Canada M5V 2H1  
Phone 647-570-0375  
Email: [info@mosaicmfg.com](mailto:info@mosaicmfg.com)

### Section 2: Hazard(s) Identification

**Regulation (EC) NO 1272/2008:** Not classified as a dangerous product

**Physical Hazards:** None

**OSHA Regulatory Status:** This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

### Section 3: Composition/Information on Ingredients

Components	CAS No.	Concentration Range (%)
HIPS Resin	9003-55-8	100

## Section 4: First-Aid Measures

**Eyes:** Flush with water. Consult a physician if symptoms persist.

**Skin Contact:** Wash with soap and water. For thermal burns from molten polymer, immediately flush with cold water. Do not attempt to remove cooled polymer from the skin. Obtain medical attention.

**Inhalation:** Leave exposed area and seek fresh air. If irritation persists seek medical attention.

**Ingestion:** Not likely due to the nature of the product. If ingested, drink plenty of water. Do not induce vomiting. Consult a physician if symptoms persist.

## Section 5: Fire-Fighting Measures

**Extinguishing Media:** Water spray, dry powder, and foam. Carbon dioxide (CO<sub>2</sub>)

Safety Precautions for Persons exposed to products of combustion should wear NIOSH approved self contained breathing apparatus and full protective equipment.

## Section 6: Accidental Release Measures

**Spill or release:** Clean up by vacuuming or sweeping to prevent falls. If molten, allow material to cool and place into an appropriate container for disposal.

## Section 7: Handling and Storage

**Precautions to be taken in handling and storage:** Store in a dry, sprinkler equipped warehouse. Product as shipped is not a combustible dust. Mechanical handling can cause the formation of dusts. To reduce the risk for dust explosion, avoid dust accumulation.

**Waste Disposal:** Dispose in accordance with applicable federal, state and local regulations.

## Section 8: Exposure Controls/Personal Protection

**Exposure Limits:** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Respiratory Protection:** A NIOSH approved respirator is recommended for protection against processing polymeric fumes, or from dust generated from grinding, sanding, or sawing operations.

**Ventilation:** Local exhaust is preferred.

**Protection Gloves:** Canvas or cotton gloves are recommended.

**Eye Protection:** Safety glasses with side shields are recommended. Other: No protective equipment is needed under normal use conditions.

## Section 9: Physical and Chemical Properties

<b>State:</b>	Solid
<b>Form:</b>	Filament
<b>Color:</b>	Varies
<b>Odor:</b>	None
<b>Freezing Point:</b>	N/A
<b>Solubility in Water:</b>	Insoluble
<b>Specific Gravity:</b>	>1
<b>% Volatile:</b>	N/A
<b>Boiling Range:</b>	N/A
<b>Vapor Pressure (MM HG):</b>	Negligible

**Melting Point:** 150°C-180°C

**Note:** Those physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## Section 10: Stability and Reactivity

**Polymerization conditions to avoid:** None

**Chemical Stability:** Stable under normal conditions

**Conditions to avoid:** Incompatible materials, including strong oxidizing agents

**Hazardous decomposition byproducts:** Thermal decomposition can yield intense heat, dense smoke, phenols, hydrogen cyanide, carbon dioxide, and carbon monoxide.

## Section 11: Toxicological Information

No specific toxicological information is available.

## Section 12: Ecological Information

No specific ecological information is available.

## Section 13: Disposal Considerations

**Waste Disposal:** Waste or unused product may be discarded in accordance with state, federal, and local regulations.

## Section 14: Transport Information

<b>Land Transport (DOT):</b>	Non-Regulated
<b>Sea Transport (IMDG):</b>	Non-Regulated
<b>Air Transport (ICAO/IATA):</b>	Non-Regulated

## Section 15: Regulatory Information

<b>TSCA:</b>	Complies
<b>EINECS/ELINCS:</b>	N/A
<b>DSL/NDSL:</b>	Complies
<b>PICCS:</b>	N/A
<b>ENCS:</b>	Complies
<b>IECSC:</b>	Complies
<b>AICS:</b>	Complies
<b>KECL:</b>	Complies

## Section 16: Other Information

Prepared by: Mosaic Manufacturing

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