

ABS (Acrylonitrile Butadiene Styrene) Premium **Material Safety Data Sheet**

CHEMICAL PRODUCT/ COMPANY IDENTIFICATION
Product Identifier: ABS (Acrylonitrile Butadiene Styrene) Product Use: Filament for FDM™ modeler Manufacturer and Address: Delta Micro Factory Corporation Rm. E506, Jinyu Intenational, 48 Wangjing West Road, Chaoyang District Beijing, 100102, P.R.China Phone: +86-10-8477-5323 Fax: +86-10-8477-5323

COMPOSITION/INGREDIENT INFORMATION				
Component	CAS #	%	OSHA/PEL	ACGIH/TLV
Acrylonitrile/butadiene/styrene resin	009003-56-9	90-100	N/E	N/E
May contain the following:				
Mineral Oil	008042-47-5	0-2	N/E	N/E
Tallow	067701-27-3	0-2	N/E	N/E
Wax	000110-30-5		N/E	N/E
N/E = not established. ABS is not considered hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR § 1910.1200				

HAZARDS IDENTIFICATION
<p>Emergency Overview: can burn in fire creating dense toxic smoke. Molten plastic can cause severe thermal burns. Secondary operations, such as grinding, sanding, or sawing, can produce dust which may present a respiratory hazard.</p> <p>Chronic/Carcinogenicity: No relevant information found.</p> <p>Melt Processing Health Effects: Molten plastic can cause severe burns.</p> <p>Medical Restrictions: There are no known human health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairment may be affected by exposure to components in the processing fumes.</p>

EMERGENCY AND FIRST AID MEASURE
<p>Inhalation: No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating, move to fresh air. Consult a physician if symptoms persist.</p> <p>Skin contact: The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. If molten plastic gets on skin, cool the skin in ice water or running water rather than ice if it occurs. Don't attempt to remove it from the skin in case of tissue damage.</p> <p>Eye contact: Flush eyes with plenty of water for at least 10 minutes immediately. Call a physician.</p> <p>Ingestion: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. If inhaled, move the people to fresh air. Consult a physician</p>

FIRE-FIGHTING MEASURES & EXPLOSION HAZARD DATA

Flash point: None

Method Used: Not applicable

Flammability Limits: LFL, UFL: not applicable

Autoignition Temperature: not applicable

Extinguishing Media: Water, fog, foam, CO₂, dry chemical

Unusual Fire and Explosion Hazards: Dense smoke emitted when burns without sufficient oxygen.

Hazardous Decomposition Products: Combustion products may include carbon monoxide hydrogen bromide, nitrogen oxides. Small amount of tyrene and hydrogen cyanide.

ACCIDENTAL RELEASE MEASURES

General: Locate the filament appropriately to protect people and environment. Review FIRE-FIGHTING MEASURES & EXPLOSION HAZARD DATA Sections.

HANDLING & STORAGE

Handling: Keep the filament dry and avoid temperature over 75°C. Keep away from the molten plastic while printing to avoid being burned.

Storage: Store in cool, dry place. Pack it while long time disuse and prevent moisture absorption and contamination.

EXPOSURE CONTROLS & PERSONAL PROTECTION

Engineering Controls: Use local ventilation to control fumes from hot processing.

Ventilation: Use with adequate ventilation.

Respiratory: Use proper respiratory equipment if dust is generated.

Eye protection: Wear eye glasses to prevent contact with eyes.

Skin: Wear heat resistant clothing and footwear if there is potential contact with molten material.

PHYSICAL & CHEMICAL PROPERTIES

Appearance: White, solid

Odor: Possibly a slight organic odor

Melting Point: Possibly > 100 ° C (212 ° F)

Specific Gravity: 1.04

Volatile By Volume: not determined

Solubility In Water: insoluble

PH: not determined

STABILITY & REACTIVITY

Stability: Stable

Condition to Avoid: Temperatures over 300° C (572° F) may decompose or release combustible gas.

Hazardous Polymerization: Will not occur.

Incompatibility: Other materials

Hazardous Decomposition: At temperatures exceeding melt temperatures, hazardous gases or vapors can be released, including carbon monoxide, hydrogen bromide, nitrogen oxides. Small amount of tyrene and hydrogen cyanide.

TOXICOLOGICAL DATA

Acute Oral: No data available. Not expected to be harmful.
Acute Dermal: No data available. Not expected to be harmful.
Acute Inhalation: No data available. Not expected to be harmful.
Skin Irritation: No data available. Not expected to be harmful.
Eye Irritation: No data available. Not expected to be harmful.
Genotoxicity: No data available. Not expected to be harmful.

ECOLOGICAL INFORMATION

Aquatic Toxicity: no information is available. Toxicity is expected to be low based on insolubility in water.

DISPOSAL INFORMATION

Waste Disposal: Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, (3) landfill. The high fuel value of this product makes options 2 very desirable for material that can't be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

TRANSPORT INFORMATION

DOT Hazard Class: Not Regulated
Proper Shipping Names: Not Regulated
Identification Number: Not listed

REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

In compliance with TSCA Inventory requirements for commercial purposes.

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

WHMIS Classification:

This product is not a "Controlled Product" under WHMIS.

OTHER INFORMATION

User Notes: Each user should read and understand this information and incorporate it into individual safety programs. This information is based upon current knowledge and our experience with the product, and is not exhaustive. In all cases, the user is not exempt from following all legal and regulatory procedures relating to the product, personal hygiene, and the integrity of the work environment. Delta Micro Factory Corporation shall not be held liable for any damage resulting from handling or from contact and use with the above product.