

MATERIAL SAFETY DATA SHEET (MSDS)- ABS Filament

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: ABS Filament

Chemical Name: Acrylonitrile Butadiene Styrene

Product Use: Thermoplastic filament for FDM / FFF 3D printing

Manufacturer / Supplier:

Fabbxible Technology

11A, Jalan Iks Bukit Tengah, Taman Iks Bukit Tengah, 14000 Bukit Mertajam, Pulau Pinang.

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2. HAZARDS IDENTIFICATION

GHS Classification:

Not classified as hazardous in solid form under GHS criteria.

Signal Word: None

Hazard Statements:

- Solid filament presents minimal hazard under normal handling.
- Heating or thermal decomposition may release irritating or harmful fumes (including styrene vapors).

Precautionary Statements:

- Avoid inhalation of fumes during printing.

- Use only in well-ventilated areas.
 - Avoid contact with molten material.
 - Keep away from open flames.
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3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
Acrylonitrile Butadiene Styrene (ABS Polymer)	9003-56-9	> 99%
Colorants / Additives	Proprietary	< 1%

4. FIRST AID MEASURES

Inhalation:

Move to fresh air. Seek medical attention if symptoms such as headache, dizziness, or irritation persist.

Skin Contact:

Wash with soap and water. If contact with molten material occurs, cool with water and seek medical attention for burns.

Eye Contact:

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Ingestion:

Not expected to be toxic. Seek medical advice if swallowed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, foam, dry chemical powder, or CO₂.

Specific Hazards:

Burning ABS may release:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Styrene vapors
- Nitrogen oxides

Protective Equipment:

Firefighters should wear self-contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid slipping hazard caused by spilled filament.

Cleanup Methods:

Collect mechanically (sweep or vacuum). Avoid creating dust.

Environmental Precautions:

Prevent entry into drains or waterways.

7. HANDLING AND STORAGE

Handling:

- Use with adequate ventilation during printing.

- Avoid breathing fumes.
- Avoid contact with heated nozzle or molten plastic.

Storage:

- Store in a cool, dry, well-ventilated area.
 - Keep away from direct sunlight and ignition sources.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Styrene (possible emission during overheating):

- ACGIH TLV: 20 ppm (TWA)

Engineering Controls:

Local exhaust ventilation recommended during printing.

Personal Protective Equipment (PPE):

- **Respiratory:** Not normally required; use mask if ventilation is poor
 - **Eye Protection:** Safety glasses recommended
 - **Skin Protection:** Heat-resistant gloves when handling hot parts
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9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Solid filament
Color	Various
Odor	Slight plastic odor when heated
Density	~1.04 g/cm ³
Melting/Softening Temperature	~200–240°C
Solubility	Insoluble in water
Flash Point	> 400°C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions

Conditions to Avoid: Excessive heat, open flame

Hazardous Decomposition Products: CO, CO₂, styrene, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Not classified in solid form

Inhalation: Fumes may cause irritation, headache, or dizziness if poorly ventilated

Skin Contact: Molten material may cause thermal burns

Carcinogenicity: Styrene is classified by IARC as Group 2A (probably carcinogenic to humans) in certain exposure conditions; risk primarily associated with vapor exposure, not solid filament

12. ECOLOGICAL INFORMATION

- Not readily biodegradable
 - No significant environmental hazard expected in solid form
 - Avoid uncontrolled environmental release
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13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

Recycling is recommended where facilities are available.

14. TRANSPORT INFORMATION

Not classified as hazardous material under ADR, IMDG, or IATA regulations.

15. REGULATORY INFORMATION

- Not classified as hazardous under GHS (solid form)



Fabrication made possible

Fabbxible Technology

ABS

Version 2

- REACH: Not subject to authorization
 - TSCA: Listed or exempt
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16. OTHER INFORMATION

Revision Date: 12/2/2026

Version: 2.0

Disclaimer:

The information provided in this MSDS is believed to be accurate but is not guaranteed. The user is responsible for ensuring safe handling and compliance with applicable regulations.