

MATERIAL SAFETY DATA SHEET (MSDS)- PC Filament

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: PC Filament

Chemical Name: Polycarbonate

CAS Number: 25037-45-0

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

Supplier Information:

Fabbxible Technology

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

Tel: 017-414 7563

Email: fabbxible@gmail.com

2. HAZARDS IDENTIFICATION

GHS Classification:

Not classified as hazardous in solid form according to GHS criteria.

Signal Word: None

Hazard Statements:

- Solid filament presents minimal hazard under normal handling.
- Heating or thermal decomposition may release irritating fumes.
- Molten material may cause thermal burns.

Precautionary Statements:

- Avoid inhalation of fumes during printing.
- Use only in well-ventilated areas.
- Avoid contact with molten material.

- Keep away from open flame and ignition sources.
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3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
Polycarbonate Resin	25037-45-0	> 99%
Additives / Colorants	Proprietary	< 1%

4. FIRST AID MEASURES

Inhalation:

Move to fresh air. If irritation, dizziness, or discomfort persists, seek medical attention.

Skin Contact:

Wash with soap and water. For contact with molten material, cool immediately 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. If swallowed, seek medical advice.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, foam, dry chemical powder, or carbon dioxide (CO₂).

Specific Hazards:

Burning polycarbonate may produce:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Phenolic compounds
- Trace amounts of other organic vapors

Protective Equipment:

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Beware of slipping hazard from spilled filament.

Cleanup Methods:

Collect mechanically (sweep or vacuum). No special environmental precautions required in solid form.

Environmental Precautions:

Prevent material from entering drains or waterways.

7. HANDLING AND STORAGE

Handling:

- Ensure adequate ventilation during 3D printing.
- Avoid breathing fumes from heated material.
- Avoid contact with hot nozzle and molten plastic.

Storage:

- Store in a cool, dry, well-ventilated area.
 - Protect from moisture and direct sunlight.
 - Keep away from strong oxidizing agents.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

No specific exposure limits established for polycarbonate resin.
Follow general workplace exposure limits for nuisance dust.

Engineering Controls:

Local exhaust ventilation recommended during printing.

Personal Protective Equipment (PPE):

- **Respiratory:** Not normally required; use mask if ventilation is insufficient
- **Eye Protection:** Safety glasses recommended
- **Skin Protection:** Heat-resistant gloves when handling heated components

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Solid filament
Color	Various
Odor	Slight odor when heated
Density	~1.20 g/cm ³
Glass Transition Temperature	~140–150°C

Printing Temperature	~250–300°C
Solubility	Insoluble in water
Flash Point	> 450°C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions

Conditions to Avoid:

Excessive heat, open flames, strong oxidizers

Hazardous Decomposition Products:

CO, CO₂, phenolic compounds, trace organic vapors

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Not classified in solid form

Inhalation: Fumes from overheating may cause irritation to respiratory tract

Skin Contact: Molten material may cause thermal burns

Eye Contact: Mechanical irritation possible

Carcinogenicity: Not classified as carcinogenic in solid form

12. ECOLOGICAL INFORMATION

- Not readily biodegradable
- No significant aquatic toxicity expected in solid form
- Avoid environmental release

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.
Recycling is recommended where facilities exist.

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

- Not classified as hazardous under GHS
 - Components comply with major international chemical inventories
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16. OTHER INFORMATION

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Disclaimer:

The information provided in this MSDS is believed to be accurate at the time of issue. However, it is provided without warranty. Users are responsible for ensuring safe handling and compliance with applicable regulations.