

ABS MSDS (MATERIAL SAFETY DATA SHEET)

PRODUCT IDENTIFICATION

Product name: ABS 3D printing filament
Product Use: Only for FDM/FFD 3D printer

COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Preparation: Substance
Chemical Name : Acrylonitrile-Butadiene-Styrene Copolymer
Content: >98 % (Additives <2 %)
Formula: (C₃H₃N, C₄H₆, C₈H₈)_x
CAS No.: 9003-56-9
Impurities Contributing to Hazard : None

HAZARD IDENTIFICATION

Most Important Hazards : None
Adverse Human Health Effects : None
Environmental Effects : None
Physical and Chemical Hazards : None

FIRST AID MEASURES

Inhalation : In case of gases evolving from melted filament, move subject to fresh air.
Treat symptomatically.
Skin Contact: In case of pellets or powder, wash with water.
Eye Contact: In case of melt, wash affected skin area and clothing with plenty of (soap and) water. Seek medical advice. In case of pellets or powder, flush with plenty of water for at least 15 minutes. Seek medical advice if any dust particles still remain.
Ingestion: Induce vomiting. Rinse mouth with water. Seek medical advice if necessary.

FIRE-FIGHTING MEASURES

Extinguishing Media: Water, Foam, Dry chemical powder
Special Fire-Fighting Procedure : Self contained breathing apparatus
Fire and Explosion Hazards: None

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ACCIDENTAL RELEASE MEASURES

Methods for Cleaning up: Recovery if not contaminated or Disposal

HANDLING AND STORAGE

Handling: Prevent from fire around handling area. Maintain good housekeeping standards to prevent accumulation of dust. To avoid dust explosion resulting from the existence of powder, electrostatics eliminators and grounding should be fixed to such equipment as air transferring pipes, bag filters and hoppers. Use electrically conductive filters for bag filters.

Storage: Keep the materials at a cool dry place. Protect from direct sunlight, rain and violent temperature fluctuation. Fire is inhibited around storage area.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Threshold Limit Value: Not determined

Ventilation: Necessary to exclude dust, fumes and gases.

Personal Protection :

Eye - Wear safety glasses for general purpose. Wear chemical goggles for cleaning molding machines.

Respiratory - Wear masks for cleaning molding machines.

Gloves - Necessary for handling melted filament.

PHYSICAL AND CHEMICAL PROPERTIES

Melting Temperature: Softening above 100oC

Solubility: Insoluble in water

Specific Gravity: 1.03 ~ 1.10

STABILITY AND REACTIVITY

Flammability: Yes

Flash Point :404 oC

Auto-ignition Temperature : 466 oC

Reactivity with Water : No

Stability : Stable and non-reactive under normal handling and storage condition.

Thermal Decomposition Gases - CO, HCN, AN, SM and NO

Combustion Energy- 3.53×10^7 J/kg (8424 Kcal/kg)

TOXICOLOGICAL INFORMATION

Irritation : Fumes or vapors generated from decomposing resin may be irritant to eyes.

Acute oral toxicity (LD50) :Not determined

Mutagenicity : Not determined

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ECOLOGICAL INFORMATION

To avoid being taken by ocean species or birds, disposal of the waste to the ocean and water sources is inhibited.

DISPOSAL CONSIDERATIONS

Controlled incineration or landfill according to local, state or national laws and regulations concerning health and pollution.

Inadequate incineration may generate toxic gases such as CO, HCN, AN and SM.

TRANSPORT INFORMATION

Not classified as a dangerous good under transport regulations.

REGULATORY INFORMATION

Not available

OTHER INFORMATION

None.