

Material Safety Data Sheet

In accordance with 29 CFR 1910.1200, ANSI Z400.1-2004, and ISO 11014-1: 1994.

1. IDENTIFICATION

Product name: ABS 3D Printer Filament

Product Use: For use in 3D printing machines

Supplier: Toner Plastics 35 Industrial Drive East Longmeadow, MA 01028

Emergency telephone numbers (24 hours a day): (413) 525-2369

2. HAZARDS IDENTIFICATION

Most Important Hazards: None

Adverse Human Health Effects: None

Environmental Effects: None

Physical and Chemical: None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Preparation: Substance

Chemical Name: Acrylonitrile-Butadiene-Styrene Copolymer

Content: > 98 % (Additives \leq 2 %)

Formula: (C₃H₃N, C₄H₆, C₈H₈)_x

CAS No: 9003-56-9

Impurities Contributing to Hazard: None

4. FIRST AID MEASURES

Inhalation: In case of gases evolving from melted filament, move subject to fresh air. Treat symptomatically.

Skin Contact: Wash with water. In case of melted filament, wash affected skin area and clothing with plenty of (soap and) water. Seek medical advice.

Eye Contact: In case of small particles, flush with plenty of water for at least 15 minutes. Seek medical advice if any small particles still remain. In case of gases evolving from melted filament of high temperature, flush with plenty of water for at least 15 minutes. Seek medical advice if necessary.

Ingestion: Induce vomiting. Rinse mouth with water. Seek medical advice if necessary.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water, Foam, Dry chemical powder

Special Fire-Fighting Procedure: Self-contained breathing apparatus

Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Methods for Cleaning up: Recovery if not contaminated or disposal

Personal Precautions: Strands/string remaining on ground may cause slipping

Environmental Precautions: Gather small particles thoroughly to avoid birds or fish taking from draining water.

7. HANDLING AND STORAGE

Handling: Prevent fire around handling area. Maintain good housekeeping standards to prevent accumulation of dust.

Storage: Keep the materials in a cool dry place. Protect from direct sunlight, rain and violent temperature fluctuation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Threshold Limit Value: Not determined

Ventilation: Necessary for fumes and gases when melting.

Personal Protection Eye: Wear safety glasses or chemical goggles for general purpose.

Respiratory: Wear masks as needed.

Gloves: Necessary for handling melted material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: String/strand

Color: Varies

Melting Temperature: Softening above 100C

Solubility: Insoluble in water

Specific Gravity: 1.03 ~ 1.10

10. STABILITY AND REACTIVITY

Flammability: Yes

Flash Point: 404C

Auto-ignition Temperature: 466 C

Reactivity with Water: No

Stability: Stable and non-reactive under normal handling and storage conditions

Dust Explosion: Possible if powder exists.

Explosion data: for powder (< 145 mesh)

Lower explosion limit: 45 g/m³

Minimum ignition energy: 3.6 mJ

Maximum explosion pressure: 7 × 10⁵ Pa

Maximum pressure increase rate: 3.2 × 10⁷ Pa/S

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

Combustion Energy: 3.53 × 10⁷ J/kg (8424 Kcal/kg)

11. TOXICOLOGICAL INFORMATION

Irritation: Fumes or vapors generated from melting or decomposing filament may irritate eyes.

Acute oral toxicity (LD₅₀): Not determined

Mutagenicity: Not determined

12. ECOLOGICAL INFORMATION

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

13. 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.

14. TRANSPORT INFORMATION

Not classified as a dangerous good under transport regulations

15. REGULATORY INFORMATION

Not available

16. OTHER INFORMATION

Product name: PLA 3D Printer Filament

Reason for revision: Created

Revision date: 01/01/2015

Recommended restrictions: None

Prepared by: Toner Plastics

The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult the Company for Further Information.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.