3DXTECH® Additive Manufacturing

SAFETY DATA SHEET

Obsidian™ FR-Nylon

EFFECTIVE DATE: 6/11/2026 REVISION NUMBER: V1.0

1 PRODUCT AND SUPPLIER INFORMATION

Product Identification:
Product Name: Obsidian™ FR-Nylon
Chemical Name: Flame Retardant Polyamide

Recommended Use: Additive Manufacturing

Supplier Information:
3DXTECH
904 36th Street SE, Suite B
Grand Rapids, MI 49508 (USA)
Phone (616) 214-7965
Email: INFO@3DXTECH.COM

2 HAZARDS IDENTIFICATION

Physical Hazards: Under hot melt processing conditions, wear personal protective equipment to prevent thermal burns.

OSHA Regulatory Status: This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

3 COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Concentration Range (%)
Polyamide	63428-84-2	>50%
Carbon Fiber	7440-44-0	Proprietary

This product contains no substances which, at their given concentrations, are considered to be hazardous to human health.

4 EMERGENCY FIRST AID

Eye Contact: Flush with water for at least 15 minutes, lifting upper and lower lids; remove contacts if present. Consult physician if symptoms persist.

Skin Contact: Wash with soap and water. For thermal burns from molten polymer, immediately flush with cold water. Do not attempt to remove cooled polymer from skin. Obtain medical attention.

Inhalation: Leave exposed area and seek fresh air. If irritation persists, seek medical attention.

Ingestion: Not likely due to nature of product. If ingested, drink plenty of water. Do not induce vomiting. Obtain medical attention.

5 FIRE AND EXPLOSION HAZARD

Suitable Extinguishing Media: Water spray, foam, dry powder

Hazardous Decomposition Byproducts: Ammonium hydroxide, carbon monoxide, carbon dioxide, hydrocarbons, nitriles, and hydrogen cyanide can be emitted at >320°C

Safety Precautions: Persons exposed to products of combustion should wear NIOSH approved self-contained breathing apparatus and full protective equipment. Dispose of fire debris and contaminated extinguishing water in accordance with federal and local regulations.

6 ACCIDENTAL RELEASE MEASURES

Spill or Release: Clean up by vacuuming or sweeping to prevent falls. Ensure adequate ventilation. If molten, allow material to cool and place into an appropriate container for disposal.

Prevent release into the environment, particularly into bodies of water or sewage systems.

7 HANDLING AND STORAGE CONDITIONS

Handling and Storage Precautions: Store in a dry, sprinkler-equipped warehouse. The product as shipped is not a combustible dust. Mechanical handling can cause the formation of dusts. To reduce the risk for dust explosions, do not permit dust to accumulate.

Protect again moisture to ensure long-term stability in storage.

Waste Disposal: Dispose in accordance with applicable federal, state and local regulations.

8 EXPOSURE AND PROTECTION INFORMATION

Exposure Limits: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Respiratory Protection: A NIOSH approved respirator is recommended for protection against processing polymeric fumes, or from dust generated from grinding, sanding, or sawing operations.

Ventilation: Local exhaust is preferred.

Hand Protection: Canvas or cotton gloves are recommended.

Eye Protection: Safety glasses with side shields are recommended.

Other: No additional protective equipment is needed under normal use conditions. Wash hands after handling.

9 PHYSICAL/CHEMICAL DATA

Form: Solid
Appearance: Black
Odor: Odorless
pH: N/A
Melt Temperature: 185-210°C
Freezing Point: N/A
Boiling Range: N/A

Flash Point: N/A
Evaporation Rate: N/A
Flammability (Solid): Not self-igniting
Vapor Pressure: Negligible
Vapor Density: N/A
Relative Density: >1.0 g/cc
Solubility in Water: Insoluble
Partition Coefficient: N/A
Viscosity: Proprietary

Note: Those physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10 STABILITY AND REACTIVITY

Polymerization Conditions to Avoid: None

Chemical Stability: Stable under normal conditions

Conditions to Avoid: Incompatible materials, temperature >320°C

Hazardous Decomposition Byproducts: Ammonium hydroxide, carbon monoxide, carbon dioxide, hydrogen cyanide, nitriles.

11 TOXICOLOGICAL INFORMATION

No specific toxicological information is available.

12 ECOLOGICAL INFORMATION

No specific ecological information is available.

Not biodegradable, insoluble in water, stable in water.

13 DISPOSAL

Waste Disposal: Waste or unused product may be discarded in accordance with state, federal, and local regulations.

14 TRANSPORT INFORMATION

Land Transport (USDOT): Not classified as a dangerous good under transport regulations.
Sea Transport (IMDG): Not classified as a dangerous good under transport regulations.
Air Transport (ICAO/IATA): Not classified as a dangerous good under transport regulations.

15 REGULATORY INFORMATION

TSCA: Complies
SARA 313: This product does not contain any chemicals which are subject to the reporting requirements of the ACT and Title 40 of the Code of Federal Regulations, Part 372

16 MISCELLANEOUS INFORMATION

NFPA Hazard Codes:

Health: 1
Flammability: 1
Reactivity: 0

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This information set forth herein has been gathered from standard reference materials and/or supplier test data and is, to the best knowledge and belief of 3DXTECH, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones which exist. 3DXTECH makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein combination with any other material or process, and assumes no responsibility therefore.

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