ESSENTIUM HTN

Thank you for your interest in Essentium's products. We are providing this safety data sheet [SDS] as a courtesy to your request. We certainly expect you to read the entire SDS and to call us with any required points of clarification. Please follow all precautions identified in this document.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Essentium HTN
Supplier:	Essentium Inc.
Address:	19025 N. Heatherwilde Blvd. Suite 100 Pflugerville, TX 78660
Manufacturer:	Essentium Inc.
Address:	19025 N. Heatherwilde Blvd. Suite 100 Pflugerville, TX 78660
Supplier Emergency Contacts & Phone:	Essentium Inc. Email: Sales@Essentium3D.com Website: Essentium3D.com
Revision Date	08/06/2019

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	WT%
Polyamide Copolymer	NA	>90%

All ingredients in quantities > 1.0% (0.1% for carcinogens) that are potentially hazardous per OSHA definitions.

SECTION 3: HAZARDS IDENTIFICATION

Hazard statement: Molten polymer will cause thermal burns. Please take all precautions necessary to avoid burns by the molten polymer.

Precautionary statement: None

Signal word: None

Potential health effects: See section 11 for more information

Environmental precautions: See section 12 for more information

Other hazards: If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. See sections 7 and 8 for additional information.

SECTION 4: FIRST AID MEASURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial best practices are followed. Precautions should be taken to avoid inhalation and eye contact.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin contact: Adverse effects are not expected from accidental skin contact following occupational exposure. After contact with skin, wash with soap and water. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer. DO NOT attempt to remove hot polymer from skin or contaminated clothing as skin may be easily damaged. Call a physician immediately.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician immediately.

Inhalation: Move to fresh air, keep person calm. Assist in breathing if necessary. Call a physician immediately.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide, water, and sand

Unsuitable extinguishing media: None known

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Special hazards arising from substance: Combustion will produce carbon dioxide, carbon monoxide nitrogen oxides, ammonia, smoke particulates

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid contact with skin and eyes. Avoid dust formation. Remove all sources of ignition. Sweep up and remove to prevent slipping hazard.

Environmental precautions: Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Methods for cleaning up: Clean up promptly by scoop or vacuum. Sweep up and shovel into suitable containers for disposal.

SECTION 7: HANDLING AND STORAGE

Safe handling advice: Use personal protective equipment. Avoid contact with skin and eyes. Low hazard for usual industrial or commercial handling. Workers should be protected from the possibility of contact with molten material during fabrication. Avoid dust formation. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. Protect from moisture and impurities. Keep the floor clear. Provide suitable exhaust for ventilation during the drying process.

Storage: Store the material in a closed container

Precautions: No special precautions required

Dangerous reaction: No dangerous reactions are known

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure control:

Engineering measures: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide appropriate exhaust ventilation at places where dust is formed.

Engineering measures: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide appropriate exhaust ventilation at places where dust is formed. Exposure limits: None established. This material can generate Particulates Not Otherwise Classifiable (PNOC). The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/mv^3 for total dust and 5 mg/m^3 for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m^3 for inhalable particulates and 3 mg/m^3 for respirable particulates.

Threshold Limit Value (TLV): Not established

Personal protective equipment:

Eye protection: Safety glasses with side-shields, goggles

Skin and body protection: Impervious clothing, gloves

Respiratory protection: Respirator must be worn if exposed to dust. Wear respirator with dust filter. Consult an industrial hygiene professional prior to respirator selection and use. Use a postive-pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand protection: Preventive skin protection, gloves

Hygiene measures: Avoid contact with skin, eyes, and clothing

Special hazard: Workers should be protected from the possibility of contact with molten material during fabrication

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid filament	**Bulk Density:**	Not available
Appearance:	White, filament	**Decomposition Temperature:**	Not available
Color:	White	**Boiling Point / Boiling Range:**	Not available
Odor:	No apparent odor	**Melting Point / Melting Range:**	225°C
pH:	Not applicable	**Flash Point:**	Not available
Vapor Pressure:	Not determined	**Autoignition Temperature:**	Not available
Vapor Density:	Not determined	**Water Solubility:**	Insoluble
Evaporation Rate:	Not applicable	**Solubility in Other Solvents:**	Not determined
Relative Density:	1.2 g/cm^3		

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None expected under conditions of normal use

Chemical stability: Stable under recommended storage conditions

Dangerous reaction: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Low hazard for usual industrial handling

Eyes: Molten material will cause thermal burns

Skin: Molten material will cause thermal burns

Ingestion: Expected to be a low ingestion hazard

SECTION 12: ECOLOGICAL INFORMATION

Water toxicity: Not Applicable

Biodegradable: Not expected to biodegrade

Mobility: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues / unused products: In accordance with local, state and national regulations. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer.

Contaminated packaging: Empty remaining contents. Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

THE COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION | PROPER SHIPPING NAME:	Not regulated for transportation
WATER TRANSPORTATION | PROPER SHIPPING NAME:	Not regulated for transportation
AIR TRANSPORTATION | PROPER SHIPPING NAME:	Not regulated for transportation

SECTION 15: REGULATORY INFORMATION

Regulatory requirements are subject to change and may differ between locations. It is the User's responsibility to ensure that all activities comply with all federal, state or provincial and local laws and regulations. The following specific information is made for the purpose of complying with numerous national, federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

Sara 313 title III:	Not listed
TSCA Inventory List:	Listed

INTERNATIONAL REGULATIONS: Contact Essentium Inc. for more information.

Not meant to be all inclusive - selective regulations represented.

SECTION 16: OTHER INFORMATION

DISCLAIMER:

Essentium Inc. nor any of its subsidiaries assumes any liability whatsoever for transporting/handling the product. It is the buyer's/user's/licensee's responsibility to ensure that its activities comply with all federal, state, provincial, or local laws and import/export requirements. We assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Essentium Inc. makes no warranties, expressed or implied, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose or course of performance or usage of trade. Final determination of suitability of any material is the sole responsibility of the user.