

MATERIAL SAFETY DATA SHEET

Omega Proto

Thank you for your interest in BCN3D's products. We are providing this material safety data sheet [MSDS] as a courtesy to your request. We certainly expect you to read the entire MSDS 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: Omega Proto

SUPPLIER: BARCELONA THREE DIMENSIONAL PRINTERS SL

ADDRESS: Miguel Servet 18, LOCAL, 08850 - Gavà (Barcelona) España

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REV. DATE: 09/20/2023

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	WT %
Copolyester	NA	>70%
Polyethylene terephthalate benzene-1,2:4,5-tetracarboxylic dianhydride; pyromellitic dianhydride	25038-59-9	>25%
Additives	89-32-7	>0.5%
	NA	<1%

All ingredients in quantities > 1.0% (0.1% for carcinogens) 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.

May cause an allergic skin reaction

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statement:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear respiratory protection.

If on skin: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a poison center/doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Dispose of contents/container to local/regional/national/international regulations

Signal word: Danger

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 Section 7 and 8 for additional information.

Dust clouds may present an explosion hazard.

Material handled at elevated temperature may cause thermal burns by contact with molten product

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. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

If experiencing respiratory symptoms: Apply cortisone spray at early stage.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide, atomized water, and sand

Unsuitable extinguishing media: High power water jet

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.

Dangerous product after decomposition: Combustion will produce carbon dioxide and carbon monoxide, and sulfur oxides.

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.

General advice

Avoid dust formation.
Do not breathe dust.
Remove all sources of ignition.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

No special measures are necessary.

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.

Advice on protection against fire and explosion : Usual measures for fire prevention. Dust clouds may present an explosion hazard.

Further information on handling : Avoid generation of dust.

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.

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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/m³ for total dust and 5 mg/m³ for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m³ for inhalable particulates and 3 mg/m³ 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 positive-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
Appearance:	Opaque, filament
Color:	Black
Odor:	No apparent odor
pH:	Not applicable
Vapor pressure:	Not determined
Vapor density:	Not determined
Evaporation rate:	Not applicable
Relative density:	1.23 – 1.27 g/cm ³
Decomposition temperature:	Not available
Boiling point / boiling range:	Not available
Melting point / melting range:	Not available
Flash point:	Not available
Autoignition temperature:	Not available
Water solubility:	Insoluble
Solubility in other solvents:	Not determined

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

Hazardous decomposition products: aldehydes. Organic acids

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Low hazard for usual industrial handling. May cause allergy or asthma symptoms or breathing difficulties if inhaled (benzene-1,2:4,5-tetracarboxylic dianhydride; pyromellitic dianhydride)
May cause an allergic skin reaction (benzene-1,2:4,5-tetracarboxylic dianhydride; pyromellitic dianhydride)
benzene-1,2:4,5-tetracarboxylic dianhydride; pyromellitic dianhydride:

Eyes: Molten material will cause thermal burns and also benzene-1,2:4,5-tetracarboxylic dianhydride; pyromellitic dianhydride causes serious eye irritation

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 BCN3D for more information.

Not meant to be all inclusive - selective regulations represented

SECTION 16: OTHER INFORMATION

DISCLAIMER:

BCN3D 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. BCN3D 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.