



## NYTEF PLASTICS, LTD.

MSDS# 005 – UNIPA® 1d

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### MSDS

#### MATERIAL SAFETY DATA SHEET

#### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** UNIPA 1d MoS<sub>2</sub> filled Nylon  
**PRODUCT USE:** Engineering/Industrial grade thermoplastic stock shapes for subsequent machining and fabrication.  
**MANUFACTURER:** NYTEF PLASTICS, Ltd.  
1642 Woodhaven Drive  
Bensalem, PA 19020  
Website: www.nytefplastics.com

#### PHONE NUMBERS:

**PRODUCT INFORMATION:** 215 638-0800 (Monday – Friday, 8:30 am – 5:00 pm)  
800 646-9833 (Monday – Friday, 8:30 am – 5:00 pm)  
**TRANSPORT EMERGENCY:** 800 424-9300 (CIIEMTREC) (24 hrs)

#### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME /CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Nylon 6/6 (Polyhexamethylene Adipamide)	32131-17-2	0.0 - 85
Nylon 6 (Polycaprolactam)	25038-54-4	15-100
Molybdenum Disulfide (MoS <sub>2</sub> )	1317-33-5	<0. 01

#### HAZARDOUS INGREDIENTS:

These nylon products are not classified as hazardous under OSHA regulations. All reportable ingredients are listed in the TSCA chemical substance inventory.

#### SECTION 313 SUPPLIER NOTIFICATION:

This product is not known to contain toxic chemicals listed under Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR part 372.

#### 3. HEALTH HAZARDS IDENTIFICATION

#### ACUTE OR IMMEDIATE EFFECTS/ROUTES OF EXPOSURE:

**SKIN:** Hot or molten nylon may cause thermal burns.  
**EYES:** Contact with powder or dust may cause mechanical irritation.  
**INHALATION:** Shapes are not considered an inhalation hazard.  
**INGESTION:** Not a probable route of exposure.

**LONG TERM/DELAYED EFFECTS:** None Known.

**MEDICAL RESTRICTIONS:** None Known

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None Known.

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Houston, Texas  
Brandon, Mississippi

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### 3. HEALTH HAZARDS IDENTIFICATION (continued)

**CHRONIC EFFECTS:** There are no known effects from exposure to UNIPA Ld polymer itself. Significant skin permeation and systemic toxicity after contact appears unlikely. There are inconclusive or unverified reports of human sensitization.

### 4. FIRST AID MEASURES

**SKIN:** If hot or molten polymer contacts skin, cool rapidly with cold water. Do not attempt to peel molten polymer from skin. Obtain medical attention for thermal burns.

**EYES:** In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician if symptoms persist.

**INHALATION:** If exposure to fumes from overheating, move to fresh air. Consult a physician if symptoms persist.

### 5. FIRE FIGHTING MEASURES

**AUTOIGNITION TEMPERATURE:** 400 C (752 °F), Method ASTM D1929

**HAZARDOUS PRODUCTS OF COMBUSTION:**

*Nylon 6/6:* At temperatures above 340 C (644 °F): heavy fuming, carbon monoxide, carbon dioxide, ammonia, and oxides of nitrogen. At temperatures above 349 C (660 °F): Hydrogen Cyanide.

*Nylon 6:* At temperatures above 300 C (572 °F): heavy fuming, carbon monoxide, carbon dioxide, ammonia, nitrogen oxides, hydrogen cyanide, hydrocarbon fragments, and sulfur oxides.

*Molybdenum Disulfide:* sulfur dioxide and carbon monoxide.

**EXTINGUISHING MEDIA:** Water spray or any class A extinguishing agent.

**SPECIAL FIRE FIGHTING INSTRUCTIONS / PRECAUTIONS:**

Fire fighters and others exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

### 6. ACCIDENTAL RELEASE MEASURES

**SPILL OR RELEASE:** Clean up by vacuuming or sweeping to prevent falls.

### 7. HANDLING AND STORAGE

**HANDLING:** Open containers only in well-ventilated area.

**STORAGE:** Dry storage. Keep containers closed to prevent contamination.



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### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**VENTILATION:** Local exhaust at processing equipment to keep particulates below 15 mg/m<sup>3</sup>, the OSHA limits for nuisance dusts. Grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards.

#### **PROTECTIVE EQUIPMENT:**

**SKIN:** Protective gloves are required when handling hot polymer, long sleeve cotton shirt and long pants when handling molten polymer.  
**EYE:** Safety glasses are recommended to prevent particulate from entering eyes while grinding or machining.  
**RESPIRATOR:** None under normal processing, if ventilation is adequate. If temperatures exceed 300 C/572 °F, a properly fitted NIOSH approved respirator is required.

**EXPOSURE GUIDELINES:** Grinding and machining of parts should be reviewed to assure that particulate levels are kept below recommended standards.

<u>INGREDIENT</u>	<u>AGENCY</u>	<u>VALUE</u>
NUISANCE/PARTICULATES	ACGIH TLV	10 mg/ m <sup>3</sup> /total 3 mg/ m <sup>3</sup> /respirable
NUISANCE/INERT DUST	OSHA PEL	15 mg/ m <sup>3</sup> /total 5 mg/ m <sup>3</sup> /respirable

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Stock shape may be rods or plates of different sizes. Mottled gray color.

**ODOR:** Essentially odorless.

**PERCENT VOLATILES:** Negligible (<1% wt).

**MELTING POINT:** 250-265 C (482-509 °F) (Nylon 6/6)  
212-230 C (413-446 °F) (Nylon 6)

**SOLUBILITY IN WATER:** Negligible (<0.1%)

**SPECIFIC GRAVITY:** 1.15 - 1.18

### **10. STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable at normal temperatures and storage conditions.

**CONDITIONS TO AVOID:** For Nylon 6/6: Heating above 340 C (644 °F).  
For Nylon 6: Heating above 300 C (572 °F).

**MATERIALS TO AVOID:** Strong acids, bases, and oxidizing agents.



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### 11. TOXICOLOGICAL INFORMATION

**CHRONIC TOXICITY:** UNIPA Ld extruded stock shapes are harmless.

**MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:**

Thermal decomposition products of Nylon have been reported to be irritating to the mucus membranes and respiratory tract.

**CARCINOGENICITY:** None Known

### 12. ECOLOGICAL INFORMATION

**AQUATIC TOXICITY:** Toxicity is expected to be low based on insolubility of polymer in water.

### 13. DISPOSAL CONSIDERATION

**WASTE DISPOSAL:** Preferred options for disposal are: recycling, incineration with energy recovery, and landfill. Treatment and disposal must be in accordance with federal, state and local regulations. Discarded product is not a hazardous waste under RCR 40 and CFR261.

### 14. TRANSPORT INFORMATION

**DOT HAZARD CLASS:** Not regulated.

**SHIPPING NAME:** Not Available.

### 15. REGULATORY INFORMATION

**TSCA INVENTORY STATUS:**

In compliance with TSCA inventory requirements for commercial purposes.

**SECTION 313 SUPPLIER NOTIFICATION (SARA TITLE III-TOXIC CHEMICALS LIST):**

This product contains no known toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR372.

**STATE REGULATIONS:**

**STATE RIGHT TO KNOW LAWS:**

With the exceptions indicated, no substances on the state hazardous list, for the states indicated below, are used in the manufacture of products on this MSDS. While we do not specifically analyze these products or the raw materials used in their manufacture for substances on various state hazardous substances lists, to the best of our knowledge the products on this MSDS contain no such substances except for those specifically listed below:

**PENNSYLVANIA:**

Substances on the Pennsylvania hazardous substances list present at a concentration of 1% or more: None Known.  
Substances on the Pennsylvania special hazardous substances list present at a concentration of 0.01% or more: None Known.

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### **15. REGULATORY INFORMATION (continued)**

#### CALIFORNIA PROPOSITION 65:

Substances known to the state of California to cause cancer: None Known.  
Substances known to the state of California to cause birth defects or other reproductive harm: None Known.

#### NEW JERSEY:

Substances on the New Jersey workplace hazardous substance list present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens, or teratogens): None Known.

#### HMIS RATING:

HEALTH	0
FLAMMABILITY	1
REACTIVITY	0
PPE	A

### **16. OTHER INFORMATION**

**PREPARED BY:** Jeff Warren  
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Bensalem, PA 19020

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The 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 NYTEF PLASTICS, Ltd., 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 that exist. NYTEF PLASTICS, Ltd. makes no warranties expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.

® UNIPA is a registered trademark of NYTEF PLASTICS, Ltd.

**END OF MSDS**

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