MATERIAL SAFETY DATA SHEET

Product: Monofilament produced from nylon 66 resin + heat stabilizer + nylon 6.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAMES: NX-327

PRODUCT USE: For fabrication into industrial products

MANUFACTURER: Jarden Applied Materials
6111 Shakespeare Road
Columbia, South Carolina 29223
Telephone: 803-754-7011
FAX: 803-754-7991

EMERGENCY PHONE NUMBER: 1-800-535-5035 INFOTRAC

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>Weight (%)</th>
<th>CAS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nylon 66 polymer</td>
<td>&gt; 95.0</td>
<td>32131-17-2</td>
</tr>
<tr>
<td>Nylon 6 polymer</td>
<td>&lt; 3.0</td>
<td>25038-54-4</td>
</tr>
<tr>
<td>Caprolactam</td>
<td>&lt; 0.3</td>
<td>105-60-2</td>
</tr>
<tr>
<td>Non-regulated additives</td>
<td>&lt; 1.0</td>
<td>-----------</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Synthetic plastic fiber with no significant odor. Fiber is not considered hazardous at ambient conditions. Avoid heating material above 660 deg. F. Exposure to fire will release irritating toxic fumes and vapors.

Potential Health Effects:
Eyes: Product fines may cause mechanical irritation; eyes should be washed out immediately with water
Skin: Mechanical irritation may occur from particles
Inhalation: Avoid breathing dust; may produce mechanical irritation to mucous membranes. Move to fresh air. Get medical attention if symptoms persist

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**Ingestion:** May cause gastrointestinal discomfort

**Ingredients found on one of the OSHA/WHIMS designated carcinogen lists are provided below:**

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>NTP STATUS</th>
<th>IARC STATUS</th>
<th>OSHA LIST</th>
<th>ACGIH STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**4. FIRST AID MEASURES**

**Skin:** Not likely to be hazardous; for irritation, flush with cool running water  
**Eyes:** If irritated, flush with plenty of water; Seek medical attention if condition persists  
**Inhalation:** Remove to fresh air; seek medical attention if condition persists  
**Ingestion:** If product is ingested, seek medical attention  
**Advice to physician:** There are no known chronic effects associated with this material.

**5. FIRE FIGHTING MEASURES**

**FLAMMABLE PROPERTIES:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Ignition Temperature:</td>
<td>788 - 806 deg. F</td>
</tr>
<tr>
<td>Flash Point Method: (ASTM D1929)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>788 - 833 deg. F</td>
</tr>
<tr>
<td>Upper Flame Limit (volume % in air):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flame Limit (volume % in air):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flame Propagation Rate (solids):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>OSHA Flammability Class:</td>
<td>Not applicable; solid material</td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>Use any standard agent (water spray, dry chemical, foam, or carbon dioxide)</td>
</tr>
</tbody>
</table>

Fire fighters should wear self contained breathing apparatus (SCBA).

**6. ACCIDENTAL RELEASE MEASURES**

**IN CASE OF SPILL OR OTHER RELEASE (always wear recommended personal protective equipment):** Sweep or vacuum material and place in container for proper disposal.

No special precautionary measures should be needed under anticipated conditions of use.

**7. HANDLING AND STORAGE**

**Normal Handling (Always wear recommended personal protective equipment):** Avoid processing material above recommended thermal processing temperature. Read product technical data sheet before use, or contact technical service representative for specific advice. Avoid inhalation and/or skin contact with product dust. Avoid dust in contact with eyes. Use local exhaust ventilation at all emission points. Wash thoroughly after handling.

**Storage Recommendations:** To maintain product quality, store in cool, dry area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls:** Good manufacturing practice and good industrial hygiene practice recommend the use of local exhaust ventilation at process emission points.
Personal Protective Equipment:

**Skin Protection:** Wear gloves when handling fiber. Wash hands after use.
**Eye Protection:** Wear safety glasses with side shields as a minimum.
**Respiratory Protection:** If dusty conditions exist, use a mechanical filter respiratory approved by NIOSH.

Additional recommendations:

**Exposure Guidelines:** Operators performing grinding and machining of product should be reviewed to assure particulate levels are kept below recommended standards.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product dust</td>
<td>10 mg/m³ total dust, TWA</td>
<td>15 mg/m³ total dust, TWA</td>
</tr>
<tr>
<td>Respirable dust</td>
<td>5 mg/m³</td>
<td>5 mg/m³, 8 Hr., TWA</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Filament
**Physical State:** Solid
**Odor:** possible slight organic odor
**Specific Gravity:** 1.14 (H₂O = 1)
**Solubility in Water:** Negligible
**pH:** Not Applicable
**Boiling Point:** Not Applicable
**Melting Point:** 490 - 510 deg F
**Vapor Pressure:** Negligible
**Evaporation Rate:** Not Applicable
**% Volatile:** < 1 %
**Flash Point:** Not Applicable
**Color:** Clear to white (may be pigmented)

10. STABILITY AND REACTIVITY

**Normally Stable (Conditions to Avoid):** Product is stable under ordinary conditions of use and storage. Avoid exposure to open flame or temperatures exceeding optimum operating temperatures. Consult technical service personnel for recommended processing conditions.

**Incompatibilities:** None known

**Hazardous Decomposition Products:** Thermal breakdown may involve a complex mixture of compounds including, but not limited to: Carbon monoxide, carbon dioxide, ammonia, nitrogen oxides, aldehydes, and hydrogen cyanide which may be flammable, toxic, and/or irritating. The specific materials generated will depend on any additives and colorants used.

**Hazardous Polymerization:** Will not occur

11. TOXICOLOGICAL INFORMATION

**Immediate (Acute) Effects:** Low hazard for usual industrial handling
**Delayed (Subchronic and Chronic) Effects:** No specific information available
**Other Data:** Not listed as a carcinogen. Nylon based resins may contain, at low concentrations, other copolymers, color additives, heat stabilizers, flame retardants, or other additives. Under normal use, these
additives are contained within the polymer and occupational exposure is expected to be minimal.

12. ECOLOGICAL INFORMATION

No ecotoxicological information is available for this product. These products are not considered degradable or toxic in terms of their physical impact. Material is expected to have low aquatic toxicity because of its insolubility in water.

13. DISPOSAL CONSIDERATIONS

Is the unused product a RCRA hazardous waste if discarded?  No
If yes, the RCRA ID number:  Not Applicable
Other Disposal considerations: Preferred options for disposal are recycle, incineration with energy recovery and landfill. Treatment, storage, transportation, and disposal of product must comply with applicable federal, state, and local disposal laws or regulations.

14. TRANSPORTATION INFORMATION

US DOT (Department of Transportation):  Not Regulated
Canadian TDG (Transportation of Dangerous Goods):  Not Regulated

15. REGULATORY INFORMATION

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

TOXIC SUBSTANCES CONTROL ACT (TSCA):
  TSCA INVENTORY STATUS: All components are listed on the TSCA Inventory or are exempt under PMN regulations.

  OTHER TSCA ISSUES: None

  US FOOD AND DRUG ADMINISTRATION (FDA): Not Applicable

SARA TITLE III/CERCLA:

  SARA/CERCLA HAZARDOUS SUBSTANCES:
  Reportable Quantities (RQ) and/or “Threshold Planning Quantities (TPQs) do not exist for this product.

16. OTHER INFORMATION

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
Changed Company Name and logo.

NATIONAL FIRE PROTECTION AGENCY (NFPA) AND NATIONAL PAINT AND COATINGS ASSOCIATION (NPCA) RATING CLASSIFICATION:

<table>
<thead>
<tr>
<th></th>
<th>NFPA</th>
<th>HMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Disclaimer: This product is NOT intended for use in medical implants.

MSDS Number: 0504  4  11/24/08
The information contained herein is presented in good faith and is accurate to the best of our knowledge. Jarden can not guarantee that any hazards listed herein are the only ones which may exist. Jarden makes no warranty of any kind, expressed or implied, concerning the safe use of this material in your process or in combination with other substances. User has the sole responsibility to determine the suitability of the material for their use. User must meet all applicable safety and health standards.

Refer to the appropriate Jarden bulletin for specific processing guidelines and good manufacturing practices.