BNX® 1098
Antioxidant and Thermal Stabilizer for Polyamides

Overview
BNX 1098 is an antioxidant that provides excellent processing and long term thermal stability in polyamide (nylon) polymers and fibers and in other materials, including other polymers, elastomers, and adhesives.

Chemistry
Chemical Name: Benzenepropanamide, N,N'-1,6-hexanediylbis[3,5-bis(1,1-dimethylethyl)-4-hydroxy-
CAS Number: 23128-74-7
Chemical Structure:

![Chemical Structure Image]

Typical Properties
Product Form: Solid
Melting Range: 156 – 161°C
Molecular Weight: 637.0 g/mol

Solubility (percent by weight, 20°C)
<table>
<thead>
<tr>
<th>Solvent</th>
<th>Solubility (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>2</td>
</tr>
<tr>
<td>Chloroform</td>
<td>6</td>
</tr>
<tr>
<td>Benzene</td>
<td>0.01</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>1</td>
</tr>
<tr>
<td>Caprolactam</td>
<td>&gt;20</td>
</tr>
<tr>
<td>Hexane</td>
<td>0.01</td>
</tr>
<tr>
<td>Caprolactam/water (95/5)</td>
<td>3</td>
</tr>
<tr>
<td>Methanol</td>
<td>6</td>
</tr>
<tr>
<td>Caprolactam/water (80/20)</td>
<td>6</td>
</tr>
<tr>
<td>Water</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Applications
BNX 1098 is especially suited for the long-term thermal and process stabilization of polyamide (nylon) molded parts, fibers, and films. It is also recommended for use in other polymers such as polyacetals, polyester elastomers, polyurethanes, and elastomers as well as other organic substrates such as adhesives and sealants.
Advantages
- Provides excellent processing and long-term thermal stability with low initial color
- Resistant to extraction
- Excellent compatibility with polyamides and other substrates
- Replaces copper-based stabilizer systems for polyamides
- Low volatility
- FDA cleared for use in polyamides

Guidelines for Use
The recommended loading concentrations of BNX 1098 range between 0.1% and 1% in polyamides, between 0.05% and 0.5% in polyacetals, polyurethanes, elastomers, and between 0.05% and 1% in adhesives and sealants. Combinations of BNX 1098 with other antioxidants such as phosphites and thioethers often show synergistic performance. BNX 1098 is also suitable for use in combination with light stabilizers, including hindered amine light stabilizers (HALS) and UV absorbers. The exact formulation to be used is dependent on the substrate, performance requirements, and other factors, and should be determined by the user based on testing to simulate actual conditions of use. Please contact Mayzo for specific recommendations.

Storage
This product may be stored up to two years in a sealed container. Containers should be kept tightly closed when not in use and stored in a cool, dry place.

Safety
Please consult the Safety Data Sheet (SDS) prior to handling or using this product.

FDA Regulations
BNX 1098 is cleared under 21 CFR §178.2010 for use as an antioxidant and/or stabilizer in polymers used in the manufacture of articles or components for use in food contact applications, including nylon resins, polyester resins, closures with sealing gaskets, repeated use rubber articles, and polyoxymethylene homo- and copolymers. Please contact your Mayzo representative for complete details, including restrictions of use.