**BLS® 1622**

**Hindered Amine Light Stabilizer for Plastics**

**Overview**

BLS 1622 is a high molecular weight hindered amine light stabilizer. BLS 1622 has minimal interaction with co-additives such as pigments and other stabilizers and thus is highly effective in systems using carbon black and pigmented systems. Secondary effects as an antioxidant are realized in the long-term heat stability of polyolefin systems. Areas of application include polyethylene, polypropylene, unsaturated polyester, styrenics, acrylics and vinyl polymers.

**Chemistry**

Chemical Name: Butanedioic acid, 1,4–dimethyl ester, polymer with 4–hydroxy–2,2,6,6–tetramethyl–1–piperidineethanol  
CAS Number: 65447-77-0  
Chemical Structure:

![Chemical Structure](image)

**Typical Properties**

Product Form: Solid  
Melting Range: 50 – 70°C  
Molecular Weight: $M_n > 2500$ g/mol

**Solubility (percent by weight, 20°C)**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Solubility (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>4.0</td>
</tr>
<tr>
<td>Chloroform</td>
<td>&gt;40.0</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethanol</td>
<td>0.08</td>
</tr>
<tr>
<td>Methylene chloride</td>
<td>&gt;40.0</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Methanol</td>
<td>0.05</td>
</tr>
<tr>
<td>Toluene</td>
<td>15.0</td>
</tr>
<tr>
<td>Water</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

**Applications**

BLS 1622 is a polymeric HALS favorable for applications where low volatility and a low melting range are required. BLS 1622 is highly effective in pigmented systems and systems using carbon black. Recommended substrates include: polyethylene, polypropylene, unsaturated polyester, styrenics, EVA, polyacetals, polyurethane, acrylics and engineering plastics. Typical end use applications include adhesives, sealants, elastomers, fibers and films. BLS 1622 can be combined with other Mayzo HALS or UV absorbers to attain synergistic effects.
Advantages

- Excellent performance in pigmented systems
- Secondary effects of long-term heat stability
- Low volatility
- Compatibility with other stabilizers
- FDA cleared for use in polyolefins and EVA

Guidelines for Use

Recommended use levels range between 0.1% and 1.5%, depending on the substrate, processing conditions, and performance requirements. BLS 1622 can be used in combination with other HALS, UV absorbers, benzoates, antioxidants, and processing stabilizers. 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 one year 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

BLS 1622 has been cleared for use in olefin polymers and ethylene-vinyl acetate copolymers under 21 CFR §178.2010. Please contact your Mayzo representative for complete details, including restrictions of use.