BNX® 1135
Liquid Antioxidant for Plastics and Lubricants

Overview
BNX 1135 is a liquid hindered phenolic antioxidant that is highly effective for the thermal stabilization of plastics (especially polyols and polyurethanes) and lubricants (especially engine oils and industrial lubricants).

Chemistry
Chemical Name: Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, C_{7-9}-branched alkyl esters
CAS Number: 125643-61-0
Chemical Structure:

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   HO
  /   \%
|     |
\-C-C-O-C_{8}H_{17}-O-
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Typical Properties
- Product Form: Liquid
- Freezing Point: < −30°C
- Molecular Weight: 376.6 g/mol

Solubility (percent by weight, 20°C)
- Acetone >50
- Benzene >50
- Chloroform 57
- Dichloromethane >50
- Ester oil >5
- Hexane < 0.1
- n-Hexane >50
- Mineral oil >5
- Polyetherpolyol >50
- Polyesterpolyol <10
- Water < 0.0003

Applications
BNX 1135 is highly effective for the stabilization of polyurethanes, including spray and RIM applications, flexible and rigid foams, and TPU. In polyols it is useful as a storage stabilizer and helps to prevent scorching during foaming. Lubricant applications for which BNX 1135 is ideal include engine, turbine, and compressor oils.
Advantages
- Improves scorch resistance of polyurethane foams
- Provides excellent thermal oxidative stability in lubricants at low treat levels
- Excellent compatibility with a variety of polymers and lubricant base oils
- Low viscosity, liquid form for ease of handling and dosing
- Low volatility
- Resistant to water extraction in lubricants

Guidelines for Use
In polyurethane and polyol applications, recommended loading concentrations range between 0.1% and 0.5%. Typical treat levels in lubricants are 0.2-0.8% in engine oils and 0.1-0.5% in industrial lubricants. BNX 1135 often provides enhanced performance when used in combination with other antioxidants (especially aminic types) and light stabilizers (especially UV absorbers and hindered amine light stabilizers). In both plastic and lubricant applications 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 1135 has not been cleared by the FDA for use in food contact applications.

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