



Mayzo Makes It Possible

BNX[®] DLTDP

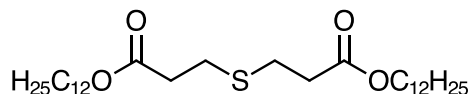
Thioether Antioxidant and Heat Stabilizer

Overview

BNX DLTDP is a thioether antioxidant, or “thiosynergist” used for the protection of plastics, adhesives, elastomers, and petroleum products against thermal oxidative degradation. It shows strong synergistic effects when used in combination with phenolic primary antioxidants.

Chemistry

Chemical Name: Propanoic acid, 3,3'-thiobis-, 1,1'-didodecyl ester
CAS Number: 123-28-4
Chemical Structure:



Typical Properties

Product Form: Solid
Melting Range: 39 – 42°C
Molecular Weight: 514.8 g/mol

Solubility (g/100 g solvent, 20°C)

Acetone	55	n-Heptane	52
Ethanol	4	Propylene glycol	insoluble
Ethyl acetate	60	Toluene	65
Ethylene glycol	insoluble	Water	<0.00001
Glycerine	insoluble		

Applications

BNX DLTDP is highly effective to improve the long-term thermal stability in a wide range of resins, adhesives, plastics, and lubricants. Combinations of BNX DLTDP with phenolic primary antioxidants (e.g. BNX 1010, BNX 1035, BNX 1076, and others) provide outstanding long-term thermal stability in polyolefins (polypropylene, polyethylene, TPO) for demanding applications such as pipe, power cables, and under-the-hood automotive components. These systems are also highly useful in styrenic polymers (e.g. ABS), acrylics, PVC, hot melt adhesives, and lubricants.

Advantages

- Provides excellent protection to polyolefins in high temperature end use applications
- Synergistic performance with phenolic primary antioxidants
- Non-discoloring and non-staining
- Excellent compatibility with plastics, elastomers, and lubricants
- Readily soluble in a wide range of organic solvents
- Broad FDA clearances

Guidelines for Use

Recommended concentrations for use in plastics and adhesives range from 0.05 to 1% by weight. Combinations of BNX DLTDP with primary antioxidants (phenolic antioxidants and multifunctional types) provide synergistic performance. BNX DLTDP is also suitable for use in combination with phosphite process stabilizers and light stabilizers (UV absorbers and benzoates). 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 DLTDP is considered "generally recognized as safe" (GRAS) for use as a food additive under 21 CFR §182.3280. It is also cleared for use in resinous and polymeric coatings under 21 CFR §175.300, in semi-rigid and rigid acrylic and modified acrylic plastics under 21 CFR §177.1010, and as an antioxidant employed in the manufacture of food-packaging materials under prior sanction (21 CFR §181.24). Please contact your Mayzo representative for complete details, including restrictions of use.

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