



Mayzo Makes It Possible

BLS[®] 292

Hindered Amine Light Stabilizer for Coatings and Plastics

Overview

BLS 292 is a liquid hindered amine light stabilizer (HALS). It provides outstanding light stability to many industrial and automotive coatings, as well as providing long-term stability to a wide variety of polymeric systems including styrenics, acrylics, polyethylene, polypropylene, and polyurethane. As a liquid, BLS 292 blends easily and disperses completely resulting in lower loading requirements, virtually eliminating the particle dispersion problems associated with traditional powder HALS. The liquid form also allows for outstanding compatibility with a wide variety of coating systems, including waterborne and UV curable coatings.

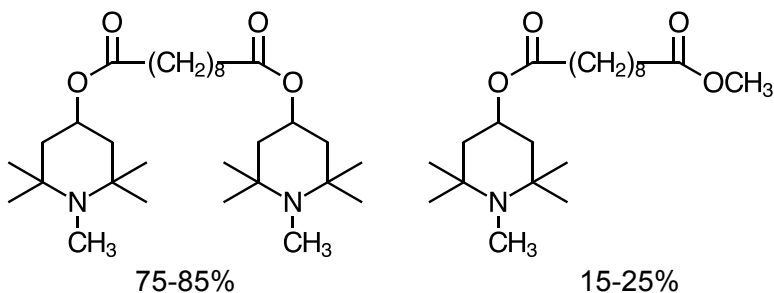
Chemistry

Chemical Names: Decanedioic acid, 1,10-bis(1,2,2,6,6-pentamethyl-4-piperidiny) ester

Decanedioic acid, 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidiny) ester

CAS Numbers: 41556-26-7
82919-37-7

Chemical Structures:



Typical Properties

Product Form: Liquid
Molecular Weight: 508.8 g/mol
369.5 g/mol

Solubility (percent by weight, 20°C)

Acetone	> 50	Methanol	> 50
Chloroform	> 50	Methylene chloride	> 50
Ethanol	> 50	Toluene	> 50
Ethyl acetate	> 50	Xylene	> 50
n-Hexane	> 50	Water	> 0.01

Applications

BLS 292 is recommended in coating applications including coil coatings, automotive coatings, radiation curable coatings, paints, inks and wood stains. Coating systems in which BLS 292 is ideal include one and two-component polyurethanes, thermosetting and thermoplastic acrylics (physical drying), water borne acrylics, radiation curable acrylics, alkyds, and polyesters. BLS 292 can also be used in combination with UV absorbers to provide significantly enhanced performance.

BLS 292 is also recommended in plastic applications, including styrenics, acrylics, polypropylene, polyethylene, unsaturated polyesters, polyurethane, elastomers, PVC, and PVB. The addition of antioxidants/process stabilizers is recommended for optimum performance in preventing thermo-oxidative degradation. Sulfur-containing phenolic antioxidants (BNX[®] 1035) may have a negative effect on the performance of BLS 292 and should be evaluated before use.

Advantages

- Excellent miscibility
- Low volatility
- Compatible with a wide variety of systems
- Highly effective in heavily pigmented systems
- Lower loading requirements as a result of complete dispersion
- Synergistic performance with other light stabilizers (coatings) and antioxidants (plastics)
- Extends life time of coatings by minimizing defects such as loss of gloss and cracking

Guidelines for Use

The recommended loading concentrations range between 0.5% and 2.0% depending on substrate, processing conditions, and long-term stability requirements. Exact loading must be determined by compositions of the specific polymer system. The dispersion of BLS 292 in waterborne coatings may be facilitated by dilution with a water miscible solvent. In plastics, recommended use levels range between 0.1 and 1.0%. The exact amount 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. BLS 292 may crystallize during storage below 0°C, but can be easily liquefied by slight warming and mixing.

Safety

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

FDA Regulations

BLS 292 has not been cleared by the FDA for use in food contact applications.

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