



Mayzo Makes It Possible

## BLS<sup>®</sup> 123

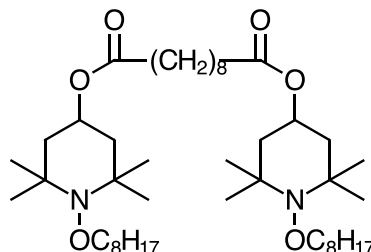
### Non-Basic Hindered Amine Light Stabilizer for Coatings and Plastics

#### Overview

BLS 123 is a liquid hindered amine light stabilizer (HALS) that provides outstanding light stability to many industrial and automotive coatings. This product has an inherently low basicity, preventing interaction with acidic coating components such as catalysts. The liquid form also allows for outstanding compatibility with a wide variety of coating systems, including waterborne and solvent-based coatings. BLS 123 is also effective for the stabilization of plastics.

#### Chemistry

Chemical Name: Bis(1-octyloxy-2,2,6,6-tetramethyl-4-piperidyl) sebacate  
CAS Number: 129757-67-1  
Chemical Structure:



#### Typical Properties

Product Form: Liquid  
Freezing Point: < -30°C  
Molecular Weight: 685.1 g/mol

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

Butyl acetate	>50	Xylene	>50
Methyl ethyl ketone (MEK)	>50	Water	<0.0006

#### Applications

Coatings applications in which BLS 123 is recommended include automotive and industrial coatings, decorative paints, and wood stains or varnishes, including both waterborne and solvent-based systems. Its low basicity makes it ideal for use in coatings that cure with an acid catalyst. Combinations with UV absorbers offer outstanding protection against cracking, gloss reduction, and chalking resulting from UV exposure and outdoor weathering.

BLS 123 is also ideal for use in plastic applications, especially in cases where conventional, basic HALS can produce undesired interactions. Examples include flexible and rigid PVC compounds, automotive parts that are to be coated with acid-cured paints, and plastics containing halogenated

flame-retardants. BLS 123 is also effective for the stabilization of other polymers, including polyvinyl butyral, unsaturated polyesters, and acrylics.

### Advantages

- Extends the lifetime of coatings by preventing the cracking and loss of gloss during outdoor weathering
- Low basicity reduces interactions with acid catalyzed coating systems, acid-sensitive polymers (*i.e.* PVC), and halogenated flame retardants as compared to conventional HALS
- Excellent solubility in and compatibility with a wide range of coating solvents
- Compatible with water-based coating systems
- Synergistic performance with other light stabilizers (UV absorbers, others)

### Guidelines for Use

The recommended use levels in coatings range between 0.5% and 3.0% (based on total solids), depending on substrate, processing conditions, and performance requirements. BLS 123 can also be used in combination with UV absorbers (*e.g.* BLS 1130, BLS 99-2) to provide significantly enhanced performance in coatings. The liquid BLS 123 can be easily emulsified into waterborne systems.

In plastics, recommended use levels range between 0.05% and 0.5%, depending on the substrate, processing conditions, and performance requirements. BLS 123 can be used in combination with other HALS, UV absorbers, benzoates, antioxidants, and processing stabilizers.

In both coating and plastic 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 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 123 has not been cleared by the FDA for use in food contact applications.

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