



Mayzo Makes It Possible

Benefos[®] 1618

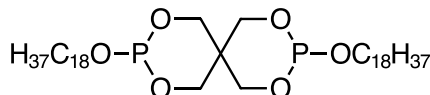
Phosphite Antioxidant and Processing Stabilizer

Overview

Benefos 1618 is a phosphite-type antioxidant for the stabilization of a wide range of plastics, elastomers, adhesives, and other substrates.

Chemistry

Chemical Name: 2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis(octadecyloxy)-
CAS Number: 3806-34-6
Chemical Structure:



Typical Properties

Product Form: Solid
Melting Range: 50 – 65°C
Molecular Weight: 733.0 g/mol

Solubility (g/100 g solvent, 25°C)

Acetone	0.3	Cyclohexane	20
Benzene	14.7	n-Hexane	25
Chloroform	45	Toluene	30
Corn oil	0.4	Water	<0.1

Applications

Benefos 1618 is particularly useful to prevent the discoloration of polymers during melt processing operations, including polyolefins, polyesters, styrenic polymers, engineering plastics, elastomers, and adhesives. It also contributes to the UV stability of polyolefins.

Advantages

- Highly effective to prevent discoloration of polymers during extrusion and molding operations
- High performance at low loading levels
- Reduces discoloration in polymers containing pigments such as titanium dioxide
- Enhances the light stability of polyolefins when used with light stabilizers
- Non-discoloring and low volatility
- FDA cleared for use in olefin polymers, EVA, and polystyrene

Guidelines for Use

The recommended loading levels range between 0.05 and 0.5% depending on the substrate, processing conditions, and other performance requirements. Best results in terms of processing and thermal oxidative stability are generally obtained by combining Benefos 1618 with conventional phenolic antioxidants (BNX 1010, BNX 1076, and others). Benefos 1618 is also suitable for use in combination with other antioxidants (for example thioethers) and light stabilizers, including hindered amine light stabilizers (HALS), 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. This product is moisture sensitive. Guard against exposure to humidity or moisture to maintain product quality. Opened containers should be used as soon as possible to avoid hydrolysis, especially during humid weather.

Safety

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

FDA Regulations

Benefos 1618 is FDA cleared under 21 CFR §178.2010, including in olefin polymers, ethylene-vinyl acetate copolymers, and polystyrene (including rubber-modified polystyrene). Please contact your Mayzo representative for complete details, including restrictions of use.

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