



Mayzo Makes It Possible

BNX[®] 549

Antioxidant for Plastics and Elastomers

Overview

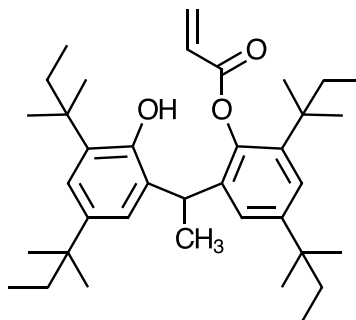
BNX 549 is a multifunctional antioxidant for the stabilization of plastics and elastomers. Unlike conventional phenolic antioxidants, BNX 549 is effective to scavenge alkyl (carbon-centered) radicals. The product is particularly active under demanding processing conditions (high temperature, high shear) and under anaerobic conditions.

Chemistry

Chemical Name: 2-Propenoic acid, 2-[1-[3,5-bis(1,1-dimethylpropyl)-2-hydroxyphenyl]ethyl]-4,6-bis(1,1-dimethylpropyl)phenyl ester

CAS Number: 123968-25-2

Chemical Structure:



Typical Properties

Product Form: Solid

Melting Range: $\geq 115^{\circ}\text{C}$

Molecular Weight: 548.8 g/mol

Solubility (20°C)

Water < 5 $\mu\text{g/L}$

Applications

BNX 549 is particularly useful for the stabilization of plastics and elastomers derived from butadiene and other dienes, for example polybutadiene and copolymers of polybutadiene and other monomers. The product is also effective in the stabilization of polyolefins and polyamides.

Advantages

- Highly effective to prevent gel formation in butadiene homo- and co-polymers, especially under anaerobic conditions
- Non-discoloring and low volatility
- FDA-cleared for use in polypropylene, styrenic block copolymers, polystyrene, and rubber-modified polystyrene

Guidelines for Use

The recommended loading levels in plastics and elastomers range between 0.05 and 0.5%. Best results in terms of processing and thermal oxidative stability are generally obtained by combining BNX 549 with conventional phenolic antioxidants and secondary antioxidants (phosphites, thiosynergists, and the like). BNX 549 can also be used in combination with light stabilizers such as 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.

Safety

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

FDA Regulations

BNX 549 is cleared under 21 CFR §178.2010 for use as an antioxidant and/or stabilizer in polymers used in the manufacture of articles or components for use in food contact applications, including polypropylene, styrene block copolymers, and polystyrene (including rubber modified polystyrene). Please contact your Mayzo representative for complete details, including restrictions of use.

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