Mayzo Makes It Possible

BNX® MD-1024

Antioxidant and Metal Deactivator

Overview

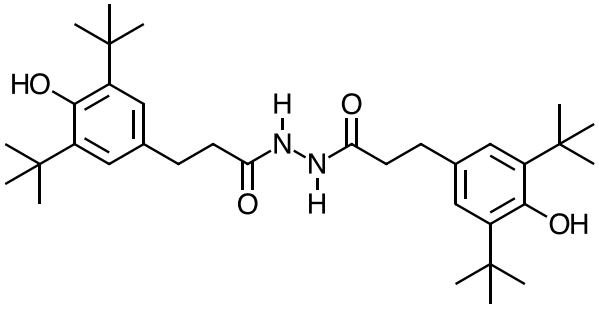
BNX MD-1024 is a hindered phenolic antioxidant and metal deactivator used for reducing or preventing the harmful effects of copper and other transition metals on polymers during processing and long-term service.

Chemistry

Chemical Name: Benzenepropanoic acid, 3,5−bis(1,1−dimethylethyl)−4−hydroxy−, 2−[3−[3,5−bis(1,1−dimethylethyl)−4−hydroxyphenyl]−1−oxopropyl]hydrazide

CAS Number: 32687-78-8

Chemical Structure:



Typical Properties

Product Form:	Solid
Melting Range:	224 – 229°C
Molecular Weight:	552.8 g/mol

Solubility (weight percent, 20°C)

Acetone	4	n-Hexane	<0.01
Benzene	0.1	Methanol	4
Chloroform	0.4	Water	<0.01

Applications

BNX MD-1024 is highly effective to prevent the harmful effects of copper conductors in polymers used as primary wire and cable insulation, including polypropylene, high- and low-density polyethylene, and some thermoplastic elastomers. It is also recommended for use other polymer systems where contact with metals may affect polymer properties and stability, including EPDM, peroxide- and radiation-crosslinked polyethylene, polybutene, styrenic polymers, unsaturated elastomers, PVC, PVB and others. Other application areas include hot melt and solvent-based

adhesives, mineral-filled plastics, powder coatings and other coatings on metals, rubber or plastic gaskets and plastic fabricated parts in contact with catalytic metals, oils and lubricants in high temperature contact with metals and contaminants and as a formaldehyde scavenger in polyacetals.

Advantages

- Ease of incorporation by compounding
- Compatibility in polyolefins and most organic polymers
- Excellent extraction resistance to oil and water
- FDA cleared for use in adhesives, ABS, and polyacetals

Guidelines for Use

Recommended concentrations for use in plastics and adhesives range from 0.05 to 0.25%. Combinations of BNX MD-1024 with other antioxidants such as hindered phenols, phosphites, and thioethers often show synergistic performance. BNX MD-1024 is also suitable for use in combination with 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.

Safety

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

FDA Regulations

BNX MD-1024 is cleared for use in adhesives under 21 CFR §175.105 and in acrylonitrile-butadiene-styrene copolymers and polyoxymethylene homo- and copolymers under 21 CFR §178.2010. Please contact your Mayzo representative for complete details, including restrictions of use.