BNX® 1215
Antioxidant and Thermal Stabilizer Blend

Overview
BNX 1215 is a synergistic blend of the phenolic antioxidant BNX 1010 and the phosphite Benefos® 1680 in a 1:2 ratio. This blend of both a primary and a secondary antioxidant provides excellent heat stability and resistance to oxidation, with good compatibility with resins and low volatility.

Chemistry

- **Chemical Names:**
  - BNX 1010: Benzene propanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1’- [2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester
  - Benefos 1680: Phenol, 2,4-bis(1,1-dimethylethyl)-, 1,1’,1”-phosphite

- **CAS Numbers:**
  - BNX 1010: 6683-19-8
  - Benefos 1680: 31570-04-4

- **Chemical Structures:**

![Chemical Structures](image)

Typical Properties

- **Product Form:** Solid
- **Melting Range:**
  - BNX 1010: 110 – 125°C
  - Benefos 1680: 183 – 187°C
- **Molecular Weight:**
  - BNX 1010: 1177.6 g/mol
  - Benefos 1680: 646.9 g/mol

Solubility

Please refer to the product data sheets for BNX 1010 and Benefos 1680 for solubility information.
Applications
BNX 1215 is a convenient blend of both a primary and secondary antioxidant. This synergistic blend addresses a broad range of stabilization needs. The relatively high phosphite content of the blend makes it ideal for use as a melt processing stabilizer in polyolefins such as polypropylene, polyethylene, polyolefin copolymers and blends, and TPO’s. This product is also useful as an antioxidant and processing stabilizer for other materials as well, including adhesives, elastomers, polyurethanes, styrenic polymers, and engineering plastics.

Advantages
- Ease and convenience for compounding operations
- Provides excellent melt stability in a wide range of polyolefins
- Phosphite component features excellent hydrolytic stability
- Non-discoloring
- Low volatility at high processing temperatures
- Extensive FDA clearances

Guidelines for Use
Typical recommended loading concentrations range between 0.05% and 0.5%. BNX 1215 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
The components of BNX 1215 have extensive FDA clearances, including in adhesives, olefin polymers and copolymers, polystyrene (including rubber-modified polystyrene), lubricants, and many other applications. Please contact your Mayzo representative for complete details, including restrictions of use.