EASTMAN

Technical Data Sheet
Santoflex™ 6PPD Liquid

Applications
- Polymer modification
- Tires

Product Description

Chemical name: N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Molecular weight: 268

Eastman Santoflex™ 6PPD functions as a powerful antioxidant and antiozonant for natural and synthetic elastomer compounds and as a synthetic polymer stabilizer. Santoflex™ 6PPD provides protection against fatigue degradation in both static and dynamic operating conditions.

MAJOR APPLICATIONS AND PROPERTIES

- Santoflex™ 6PPD applications include the use in pneumatic tire components, solid tires, belts, hoses, cables, automotive mounts, bushings and general mechanical products that are exposed to continuous and intermittent dynamic operating conditions and require protection from ozonation.
- Santoflex™ 6PPD provides powerful antiozonant and antioxidant properties with excellent high temperature, fatigue and flex resistance to rubber compounds.
- It gives efficient stabilization for a wide range of solution and emulsion polymers.
- Santoflex™ 6PPD is a more active antioxidant than quinoline or diphenylamine based antioxidants.
- Santoflex™ 6PPD gives better long term fatigue resistance and ozone protection than IPPD. Due to its specific molecular structure and higher rubber solubility, it is less affected by environmental variables, such as heat or leaching, leading to greater durability.
- Santoflex™ 6PPD gives rubber protection against catalytic degradation by copper and other heavy metals.
- The product has no negative effects on compound adhesion to textiles or steel cord up to levels of 2 phr. Above this concentration it may bloom and interfere with ply to ply and ply to cord adhesion.
- It will discolor compounds and cause severe contact and migration staining.

Typical Properties

Property	Test Method	Typical Value, Units
General		
Form		Liquid
Viscosity @ 60°C	FF97.9	27-37 cSt
Specific Gravity @ 60°C/15°C		0.986-1.010

Key Attributes
• Santoflex 6PPD provides powerful antiozonant and antioxidant properties with excellent high temperature fatigue and flex resistance to rubber compounds.
• Santoflex 6PPD is a more active antioxidant than quinoline- or diphenylamine-based antioxidants.
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Applications

• Santoflex 6PPD applications include the use in pneumatic tire components, solid tires, belts, hoses, cables, automotive mounts, bushings and general mechanical products that are exposed to continuous and intermittent dynamic operating conditions and require protection from ozonation.
• It gives efficient stabilization for a wide range of solution and emulsion polymers.
• Santoflex 6PPD is used as an inhibitor in styrene monomer, p-methylstyrene, divinylbenzene and acrylate esters production and as a column antifoulant

Storage and Shelf Life

Store Santoflex 6PPD liquid in a covered vessel between 50°C and 60°C. If material is to be stored for greater than 30 days or at temperature higher than 60°C, the vessel should contain a nitrogen blanket to prevent the product from oxidizing, which will reduce its usefulness as an antiozonant. Do not store material above 75°C for more than 90 days. In bulk storage, continuous circulation will help minimize temperature gradients in the tank and reduce heating element fouling, thus maximizing the product'''''''s consistency.

The shelf life of Santoflex 6PPD is 24 months from the date of manufacture, based on the recommended handling and storage conditions. Once the material has surpassed shelf life, please contact us if you would like to receive our suggestions for material re-verification, based on key product characteristics.

Handling Precautions

For detailed information on toxicological properties and handling precautions please refer to the current Safety Data Sheet. This information sheet can be downloaded from our web site or requested from the nearest Eastman office and should be consulted before handling this product.

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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