

Technical Data Sheet

Santoflex™ 134PD

Applications

- Polymer modification
- Tires

Product Description

Chemical name: Blend of alkyl-aryl-p-phenylenediamines
Molecular weight: 268/282

Santoflex™ 134PD functions as a synthetic polymer stabilizer and can be used as a high activity antidegradant for natural and synthetic elastomer compounds.

MAJOR APPLICATIONS AND PROPERTIES

- Santoflex™ 134PD is a 1:2 blend of N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (Santoflex™ 6PPD) and N-1,4-dimethylpentyl-N'-phenyl-p-phenylenediamine (Santoflex™ 7PPD). Both constituents show comparable activity. Therefore, their blends can be regarded as similar to Santoflex™ 6PPD in terms of performance in rubber.
- Santoflex™ 134PD provides efficient stabilization for a wide range of solution and emulsion polymerized elastomers that can tolerate discoloration.
- The product provides powerful antiozonant and antioxidant properties with excellent high temperature flex fatigue resistance to rubber compounds.
- Santoflex™ 134PD is a liquid at room temperature, providing handling advantages over heated liquid PPD's.
- Santoflex™ 134PD provides compound protection against catalytic degradation by copper and other heavy metals.
- Santoflex™ 134PD 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	Typical Value, Units
General	
Form	Liquid mixture
Viscosity @ 75°C	13-17 cSt
Specific Gravity @ 45/15°C	0.992-1.010

Compounding Information

Polymer Stabilization:

Santoflex™ 134PD stabilizes synthetic polymers, providing cost effective retention of viscosity and resistance to gel formation to give longer storage life. Use 0.3 to 0.6% on a dry basis in either emulsion or solution synthetics. For emulsion systems one must first emulsify Santoflex™ 134PD. You can request a suggested formula to make a 50% emulsion from your local Eastman representative.

Solid Rubber:

Add 1-3 phr of Santoflex™ 134PD to rubber compounds for resistance to ozone and flex fatigue. Increasing level provides increasing protection. To provide maximum performance in static applications include a blended wax in the compound formulation, appropriately chosen for the application's temperature range.

Santoflex™ 134PD resists oxidation in cured compounds. However, also adding TMQ antioxidant to the compound will protect the antiozonant from oxidation, thus further enhancing long term performance.

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.

Storage

Santoflex™ 134PD can be stored in drums or in bulk tanks. Store drums below 35°C and away from direct sunlight. For heated bulk storage above 35°C incorporate a nitrogen blanket on the tank to prevent product oxidation that could reduce its usefulness as an antiozonant. Also continuously circulate product stored in heated tanks to minimize temperature gradients and reduce heating element fouling, thus maximizing the product's consistency.

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