

# Technical Data Sheet

## Santoflex™ 134PD

### Applications

- Polymer modification
- Tires

### Product Description



Chemical name: Blend of alkyl-aryl-p-phenylenediamines

Molecular weight: 268/282

Eastman 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 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.

Santoflex 134PD is very effective as a polymerization inhibitor.

Santoflex 134PD is a liquid at room temperature, providing handling advantages over heated liquid PPDs.

### Typical Properties

Property	Test Method	Typical Value, Units
<b>General</b>		
Form		Liquid
Viscosity @ 75°C	FF97.9	70-85 cSt
Specific Gravity @ 45°C/15°C	FF97.4	0.992-1.010

### Key Attributes

- Santoflex 134PD provides powerful antiozonant and antioxidant properties with excellent high temperature fatigue and flex resistance to rubber compounds.
- Santoflex 134PD is a more active antioxidant than quinoline- or diphenylamine-based antioxidants.
- Santoflex 134PD 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 134PD gives rubber protection against catalytic degradation by copper and other heavy metals.
- It will discolor compounds and cause severe contact and migration staining.

### Applications

- Santoflex 134PD 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 134PD is used as an inhibitor in styrene monomer, p-methylstyrene, divinylbenzene and acrylate esters production and as a column antifoulant.

## Storage and Shelf Life

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.

The shelf life of Santoflex 134PD 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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