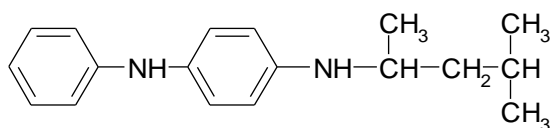


Technical Data Sheet

# KUMANOX 13 (6PPD)

N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine

## Formular



Molecular Weight : 268.4

CAS Number : 793-24-8

## Product Properties

Class	p-Phenylene diamines
Appearance	brownish pastille
	dark brownish liquid
Melting point, min (°C)	46.0 (initial)
Heat loss (%)	max. 0.5 at 70°C, 2 hrs.
Ash (%)	max. 0.3
Staining	Severe

## Characteristics and Applications

- Used for an outstanding antioxidant, antiozonant and stabilizer for natural and synthetic rubber such as SBR, NBR, BR, IR.
- Provides excellent antioxidant and antiozonant properties with protection against oxidation, ozone attack, heat aging, fatigue, flexcracking and metal poisons to rubber goods.
- Gives higher rubber solubility due to its good dispersion in rubber compounds.
- Main Use : tires, belts, hoses, cables, automotive mounts and goods for industrial uses.
- The level of addition of KUMANOX 13 is 1~4 phr for resistance to ozone, oxygen and flexcracking.  
※ phr : typical levels of addition based on 100 parts by weight of elastomer.

## Solubility

- Soluble in toluene, acetone, ethanol, methylene chloride and ethyl acetate.
- Insoluble in water.

## Storage

- Pastille: The material should be in a cool, dry, well-ventilated area, avoiding exposure of the direct sunlight. The material should be protected from light, especially direct sunlight and strong artificial light with a high UV content. Do not store the material where it may be exposed to an increase in temperature and keep it below 35°C. More appropriately, we recommend to store it below 32°C. Multi-layered stacking at exceeding 32°C causes the lumping of pastilles.  
(No stacking more than 1 ton of material on the Kumanox 13)
- Liquid: The material in the container shall be stored at approximately 60°C, preferably filled with inert gas

## Shelf life

- 1 years from date of production
- The shelf life of the material keeps well with based on the recommended handling and storage conditions. Once the material has surpassed shelf life, please contact us for suggestions on material re-verification based on key product characteristics.

## Packaging

- Liquid : Bulk
- Pastille : Paper bag (25kg), FIBC big bag (500kg, 1,000kg)