

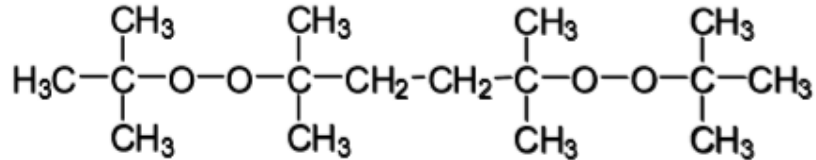
Technical Data Sheet (TDS)

DHBP-45-PSI1
Crosslinking (XL)

DHBP-45-PSI1

2,5-Dimethyl-2,5-di (tert.butylperoxy) hexane
CAS#78-63-7
White stiff paste

Structural Formula



Description

White paste, consisting of ca. 45 % 2,5-dimethyl-2,5di(tert.butylperoxy) hexane, desensitised with silicone rubber.
This bifunctional dialkyl peroxide is used as a radical initiator in the crosslinking of silicone rubber at above 170°C.

Technical Data

Appearance	white stiff paste
Desensitising agent	silicone rubber
Assay	ca. 45 % w/w
Active oxygen (AO)	ca. 4,96 % w/w
Critical temperature (SADT)	ca. 90 °C
Recommended storage temperature	below 30 °C
Storage stability as from date of delivery	6 months

Standard Packaging

15 kg (33,1 lbs) in plastic buckets

Decomposition Products

Possible detectable decomposition products: Acetone, tert.Butyl alcohol, 2,5-Dimethylhexane-2,5-diol

Storage

Avoid any source of heat, light, humidity and protect the product from impurities. Keep within save temperature limits.

Half-life Data

10 h / 1 h / 1 min (benzene, 0.1 mol/L) 120 °C / 142 °C / 190 °C

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Application

POLYMER-CROSSLINKING:

A crosslinking agent for many polymers and elastomers, especially silicone rubber (VMQ).

Crosslinking temperature: above 170 °C

At below 140 °C no premature crosslinking (scorch) occurs.

Usage level: 1 - 6 %

Special advantages:

- Efficient and very versatile
- The paste form facilitates mixing and homogenisation
- Volatile, odour free decomposition products
- no blooming on the vulcanisation surface.

Approved for crosslinking of silicone rubber by FDA (§ 177.2600) and BGVV (XV/3).

Measurements

Crosslinking properties with silicone rubber (HTV)

VMQ-Crosslinking (Wacker R 401/60-U)

Monsanto-Rheometer 100-S (torsions angle 3 °, Chamber volume 7.3 cm³)

Influence of temperature on crosslinking activity (0.60 % DHBP-45-PSI1 / 0.03 % AO)

Temperature [°C]	160	180	200
Scorch-time [min]	3.1	1.1	0.8
Crosslinking time t ₅₀ [min]	5.5	1.8	1.1
Crosslinking time t ₉₀ [min]	11.1	3.1	1.6

Influence of dosage on physical properties (Temperature: 150 °C)

DHBP-45-PSI1 [% AO]	0.02	0.03	0.04
DHBP-45-PSI1 [% w/w]	0.40	0.60	0.81
Crosslinking time t ₉₀ [min]	4	3.1	3
Max. Torque [Nm]	29.6	29.8	29.4
Tensile strength [Nm/mm ²]	11.6	12.3	11.3
400% Modul [N/mm ²]	4	4.2	4
Elongation [%]	851	824	821
Shore A hardness	60	61	61
Rebound [%]	63	62	62.5

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