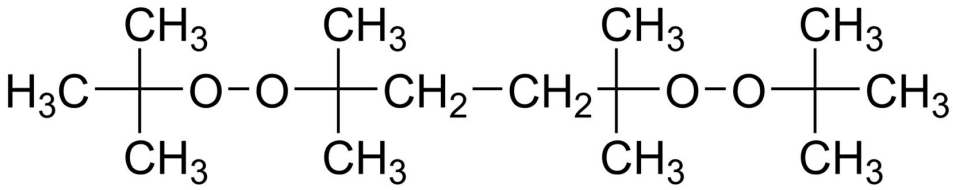
Trigonox 101-7.5PP

2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane, 7.5% on polypropylene carrier



Trigonox 101-7.5PP is a peroxide formulation for the production of controlled rheology polypropylene (CR-PP).

CAS number
78-63-7

EINECS/ELINCS No.
201-128-1

TSCA status
listed on inventory

Molecular weight
290.4

Active oxygen content peroxide
0.77-0.88%

Specifications

Assay	7.0-8.0 %

Characteristics

Appearance	Free flowing white powder
Bulk density	490 kg/m^3

Applications

Controlled rheology polypropylene: Trigonox 101-7.5PP-pd is an efficient peroxide formulation for the controlled rheology of polypropylene (CR-PP) in the temperature range of 200-250°C. This powder form masterbatch of the liquid Trigonox 101 allows a more accurate dosage of the peroxide to the polymer. Also a more homogeneous distribution of the peroxide throughout the polymer is of advantage. Using the powder form formulation rather than the liquid form results in a better control of the visbreaking process. Trigonox 101 allows polypropylene producers great flexibility in controlling a polymer's Melt Flow Index (MFI). Small changes in either peroxide concentration or process temperature can produce significantly different MFI's.

Half-life data

The reactivity of an organic peroxide is usually given by its half-life (t1/2) at various temperatures. For Trigonox 101-7.5PP in chlorobenzene half-life at other temperatures can be calculated by using the equations and constants mentioned below:

0.1 hr	156
1 hr	134
10 hr	115
Formula 1	kd = A·e-Ea/RT
Formula 2	t½ = (ln2)/kd
Ea	155.49 kJ/mole
A	1.68E+16 s-1
R	8.3142 J/mole·K
T	(273.15+°C) K

Thermal stability

Organic peroxides are thermally unstable substances, which may undergo self-accelerating decomposition. The lowest temperature at which self-accelerating decomposition of a substance in the original packaging may occur is the Self-Accelerating Decomposition Temperature (SADT). The SADT is determined on the basis of the Heat Accumulation Storage Test.

SADT	80°C
Method	The Heat Accumulation Storage Test is a recognized test method for the determination of the SADT of organic peroxides (see Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria - United Nations, New York and Geneva).

Storage

Due to the relatively unstable nature of organic peroxides a loss of quality can be detected over a period of time. To minimize the loss of quality, Nouryon recommends a maximum storage temperature (Ts max.) for each organic peroxide product.

Ts Max.	30°C
Note	When stored under these recommended storage conditions, Trigonox 101-7.5PP will remain within the Nouryon specifications for a period of at least 3 months after delivery.

Packaging and transport

The standard packaging is a cardboard box for 15 kg peroxide formulation. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Trigonox 101-7.5PP-pd is classified as a non-dangerous good according to national and international transport regulations.

Safety and handling

Keep containers tightly closed. Store and handle Trigonox 101-7.5PP in a dry well-ventilated place away from sources of heat or ignition and direct sunlight. Never weigh out in the storage room. Avoid contact with reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers and metal soaps). Please refer to the Safety Data Sheet (SDS) for further information on the safe storage, use and handling of Trigonox 101-7.5PP. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at https://polymerchemistry.nouryon.com.

Major decomposition products

Acetone, tert-Amyl alcohol, Methane, Ethane, tert-Butanol

Contact Us

Europe, Middle East, India and Africa
polymerchemistry.nl@nouryon.com

Asia Pacific
polymerchemistry.ap@nouryon.com

Americas
polymerchemistry.na@nouryon.com

Nouryon