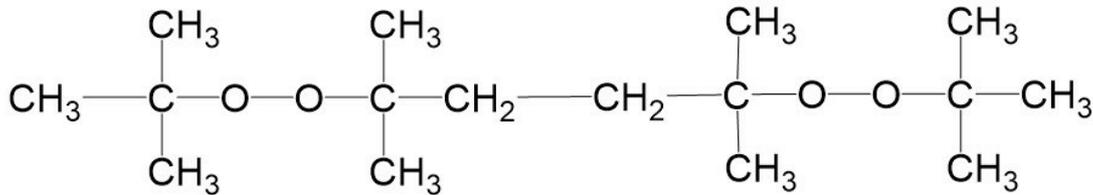


## Trigonox 101-7.5PP

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

|            |           |
|------------|-----------|
| Appearance | Beads     |
| Assay      | 7.0-8.0 % |

### Characteristics

|              |                       |
|--------------|-----------------------|
| Bulk density | 490 kg/m <sup>3</sup> |
|--------------|-----------------------|

### Applications

Controlled rheology polypropylene: Trigonox® 101-7.5PP 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® 101-7.5PP 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® 101-7.5PP 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 ( $t_{1/2}$ ) 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 | $k_d = A \cdot e^{-E_a/RT}$ |
| Formula 2 | $t_{1/2} = (\ln 2)/k_d$     |
| Ea        | 155.49 kJ/mole              |
| A         | 1.68E+16 s <sup>-1</sup>    |
| 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 ( $T_s$  max. ) for each organic peroxide product.

|            |  |
|------------|--|
| $T_s$ 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 12 months after delivery. |

## Packaging and transport

In North America the standard packaging is a 110 lb drum and 350 kg FIBC (Supersack). In the other regions it is packed in 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 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 [nouryon.com/sds-search](http://nouryon.com/sds-search).

## Major decomposition products

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

All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Nouryon, however, makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nouryon does not accept any liability whatsoever arising out of the use of or reliance on this information, or out of the use or the performance of the product. Nothing contained herein shall be construed as granting or extending any license under any patent. Customer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes. The information contained herein supersedes all previously issued information on the subject matter covered. The customer may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers and footers, and should refrain from any unauthorized use. Don't copy this document to a website.

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The Nouryon logo consists of a stylized blue 'N' followed by the word 'ouryon' in a lowercase, sans-serif blue font.