

Trigonox 301

for Controlled Rheology Polypropylene



AkzoNobel

Tomorrow's Answers Today

Trigonox® 301 is a very cost effective organic peroxide for controlling the MFI and MWD of polypropylene.

It is the most sustainable solution in the market!

As with other organic peroxides, Trigonox 301, enables the user to make nearly instantaneous grade changes without downtime or production of off-spec, "change-over" resin.

Food contact approved

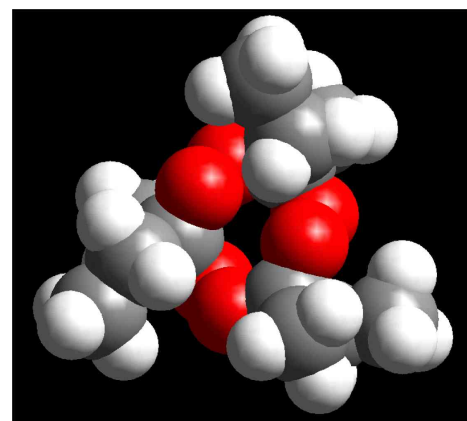
Trigonox 301 is a 7.5% active oxygen (aO) formulation in Isopar M solvent. Along with Isopar M, Trigonox 301 has US FDA and German BfR approval for use in polypropylene for food contact applications.

When compared to other organic peroxides used for CRPP, Trigonox 301 is clearly one of the most cost effective, efficient and safe of those approved for use in food contact applications.

Because of its high efficiency Trigonox 301 is the low cost alternative to more commonly used modifiers such as 2,5 -Dimethyl-2,5-di(tert-butylperoxy)hexane (Trigonox 101).

A sustainable solution

Important from a regulatory and environmental standpoint, Trigonox 301 leads to the creation of only about one third of the volatiles (VOC's) when used, as compared to products such as Trigonox 101. Not only are there fewer volatiles but the volatiles contain no tertiary butanol (TBA) or acetone. Both of these by-products are undesirable from an odor and taste standpoint and often remain in the polymer. The majority of by-products from Trigonox 301 use are very low molecular weight species which are lost during the first extrusion of the polymer!



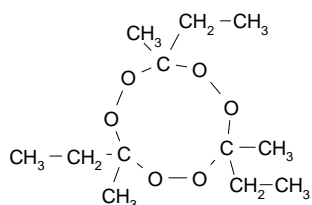
Global availability

Trigonox 301 is available globally from AkzoNobel and is seeing growing use in the area of CRPP. Several major polypropylene producers are already using it and it is currently approved by several global licensors. AkzoNobel will work with you in replacing your existing solution to make the conversion as easy as possible.



Product description

3,6,9-Triethyl-3,6,9-trimethyl-1,4,7-triperoxonane, 41% solution in isoparaffinic hydrocarbons



Molecular weight	: 264.3
Active oxygen content peroxide	: 18.16%
CAS No.	: 24748-23-0
EINECS/ELINCS No.	: 429-320-2
TSCA status	: listed on inventory

Specifications

Appearance, 25°C	: Clear to slightly hazy liquid
Color	: 50 Pt-Co / APHA max.
Active oxygen	: 7.3-7.6%

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, AkzoNobel recommends a maximum storage temperature (T_s max.) for Trigonox 301:

$$T_s \text{ max.} = 40^\circ\text{C} (104^\circ\text{F}) \text{ and}$$

$$T_s \text{ min.} = 10^\circ\text{C} (50^\circ\text{F})$$

DO NOT STORE AND TRANSPORT AT OR BELOW 0°C FOR SAFETY REASONS.

When stored according to these recommended storage conditions, Trigonox 301 will remain within the AkzoNobel specifications for a period of at least three months after delivery.

Safety and Handling

Keep away from open fire, sparks and other sources of heat or ignition.

Avoid contact with reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers and metal soaps).

DO NOT FREEZE, STORE *Trigonox* 301 ABOVE 0°C!

Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of *Trigonox* 301. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available at www.akzonobel.com/polymer.

Packaging and Transport

In North America *Trigonox* 301 is packed in non-returnable, 15 gallon drums of 100 lb net weight. In other regions the standard packaging is a 30-liter Nourytainer® for 25 kg peroxide formulation.

For the availability of other packed quantities consult your AkzoNobel representative.

Trigonox 301 is classified as Organic peroxide type D; liquid, Division 5.2; UN 3105.

For more information

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