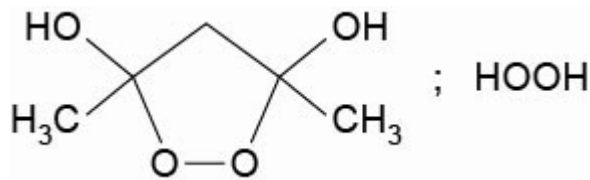


Trigonox 44B VRN

3,5-Dimethyl-1,2-dioxolane-3,5-diol



Trigonox 44B VRN is an acetylacetone peroxide formulation for fast curing of unsaturated polyester resins in the presence of a cobalt accelerator at room and elevated temperatures, including a Vanishing Red (VR) system.

CAS number
13784-51-5

EINECS/ELINCS No.
253-384-9

TSCA status
listed on inventory

Specifications

| | |
|---------------------|-------------------|
| Appearance | Red liquid |
| Color | ≤ 50 Pt-Co / APHA |
| Total active oxygen | 4.0-4.2 % |
| Viscosity, 20°C | 21 mPa.s |

Characteristics

| | |
|----------------|-------------------------|
| Density, 20 °C | 1.055 g/cm ³ |
|----------------|-------------------------|

Applications

Trigonox 44B VRN is an acetyl acetone peroxide formulation for the curing of unsaturated polyester resins in the presence of a cobalt accelerator at room and elevated temperatures. With the curing system Trigonox 44B VRN/cobalt accelerator a much faster speed of cure may be achieved than with curing systems based on a MEKP plus cobalt accelerator, at room and elevated temperatures. Normally the gel times with Trigonox 44B VRN are comparable to those with Butanox M-50. Trigonox 44B VRN is particularly suitable in those applications where a fast mould-turnover is required, e.g. for the cold press moulding or resin injection moulding techniques. The system Trigonox 44B VRN/cobalt accelerator will give a higher peak exotherm than a standard MEKP/cobalt accelerator system. Due to this fact, it is recommendable to avoid the production of too thick laminates in one operation. At low temperatures a reasonable speed of cure is still obtained when Trigonox 44B VRN is used in combination with large amounts of cobalt accelerator possibly in combination with N,N-Dimethylaniline as promotor.

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 | 60°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. | 25°C |
| Ts Min. | -10°C to prevent crystallization |
| Note | When stored under the recommended storage conditions, Trigonox 44B VRN will remain within the Nouryon specifications for a period of at least 3 months after delivery. |

Packaging and transport

The standard packaging is a 4 x 8 lb carton. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Trigonox 44B VRN land and sea transport is classified as Organic peroxide type E; liquid, Division 5.2; UN 3107. Air transport is classified as Organic peroxide type D; liquid, Division 5.2; UN 3105. This product contains a component that is classified as Toxic for Reproduction, Category 1B under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Nouryon ensures that it consistently manages hazardous substances to ensure safe use. To that end, a full risk assessment of this product has been conducted under Nouryon's Priority Substance Program and safe use has been demonstrated throughout the supply chain.

Safety and handling

Keep containers tightly closed. Store and handle Trigonox 44B VRN 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 44B VRN. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at nouryon.com/sds-search

Major decomposition products

Carbon dioxide, acetyl acetone, mixture of aliphatic acids, water

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 orange 'N' followed by the word 'ouryon' in a lowercase, sans-serif font, all in orange.