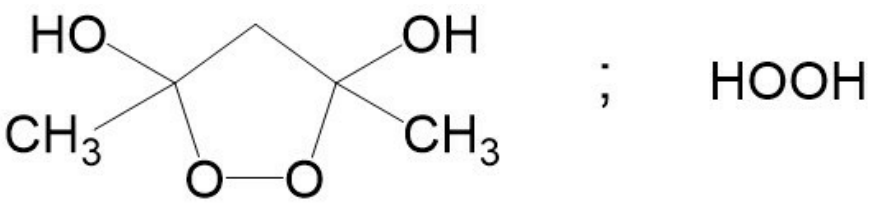
Trigonox 44B

Acetyl acetone peroxide, in solvent mixture



Trigonox® 44B 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 VR system.

CAS number
37187-22-7 (for EU: 13784-51-5)

EINECS/ELINCS No.
253-384-9 (for EU: 237-438-9)

TSCA status
listed on inventory

Specifications

Appearance	Clear liquid
Color	50 Pt-Co max.
Total active oxygen	4.0-4.2 %

Characteristics

Density, 20°C	1.055 g/cm^3
Viscosity, 20°C	21 mPa.s

Applications

Trigonox® 44B 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/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 are comparable to those with Butanox M-50.
Trigonox® 44B is particularly suitable in those applications where a fast mold-turnover is required, e.g. for the cold press molding or resin injection molding techniques. The system Trigonox® 44B/cobalt accelerator will give a higher peak exotherm than a standard MEKP/cobalt accelerator system. Due to this fact, is it 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 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. Note: Ts min. -10°C to prevent crystallization.

Ts max.	25°C
Ts min.	-10°C
Note	When stored under the recommended storage conditions, Trigonox® 44B will remain within the Nouryon specifications for a period of at least 6 months after delivery.

Packaging and transport

The standard packaging is a 30-liter HDPE can (Nourytainer®) for 30 kg peroxide solution. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Trigonox® 44B 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.

Safety and handling

Keep containers tightly closed. Store and handle Trigonox® 44B 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. 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

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