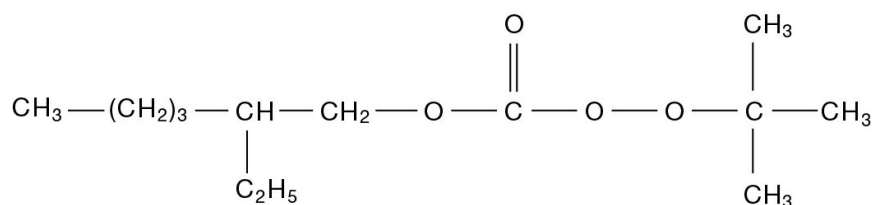


Trigonox 117 Solar

tert-Butylperoxy 2-ethylhexyl carbonate



Trigonox 117 Solar is a highly efficient crosslinking peroxide, mainly applied for the crosslinking of encapsulant films (EVA / POE) used for the production of photovoltaic devices.

CAS number
34443-12-4

EINECS/ELINCS No.
252-029-5

TSCA status
listed on inventory

Molecular weight
246.3

Active oxygen content peroxide
6.49%

Specifications

Active oxygen	≥ 6.39 %
Appearance	Clear liquid
Assay	≥ 98.5 %
Color	≤ 30 Pt-Co / APHA
Water	≤ 0.15 %

Characteristics

Density, 20 °C	0.930 g/cm ³
Viscosity, 20 °C	5.8 mPa.s

Notes:

Dosage levels: the amount of peroxide to be added to the final formulations does not only depend on the formulation composition designed, also final crosslink density required for end-use, determine the dosage level. Recommended dosage levels for Trigonox 117 Solar are between 0.5 and 1.75% weight based on the polymer.

Applications

Trigonox 117 Solar can be used to crosslink polymers at intermediate temperatures, with a typical crosslinking temperature of 130-140°C. Trigonox 117 Solar is recommended for highly demanding applications e.g. as crosslinker for ethylene vinyl acetate copolymer (EVA) or polyolefin elastomer (POE) films, to be finally applied in photovoltaic devices. The high purity of the product meets the stringent final industry requirements. Cure reactivity allows solar cell lamination temperatures of 135 - 170°C.

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.	20°C
Note	When stored according to these recommended storage conditions, Trigonox 117 Solar will remain within the Nouryon specifications for a period of at least 3 months after delivery.

Packaging and transport

Trigonox 117 Solar is packed in a 30-liter HDPE can (Nourytainer) for 25 kg peroxide content. Both packaging and transport meet the international regulations. For the availability of other packed quantities consult your Nouryon representative. Trigonox 117 Solar is classified as Organic peroxide type D; liquid, Division 5. 2; UN 3105.

Safety and handling

Keep containers tightly closed. Store and handle Trigonox 117 Solar 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, acids, alkalis and heavy metal compounds. Please refer to the Safety Data Sheet (SDS) for further information on the safe storage, use and handling of Trigonox 117 Solar. 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, tert-Butanol, 2-Ethylhexanol

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 logo for Nouryon, featuring a stylized blue 'N' followed by the word 'ouryon' in a blue sans-serif font.