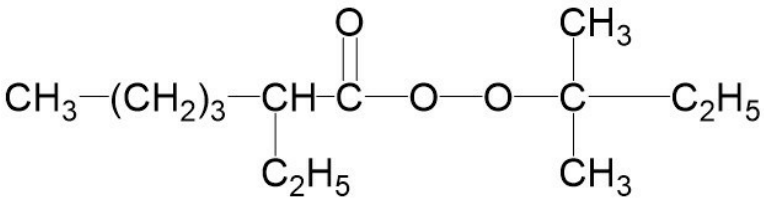
Trigonox 121

tert-Amyl peroxy-2-ethylhexanoate



Trigonox® 121, tert-amyl peroxy-2-ethylhexanoate, is a perester which is used for the curing of unsaturated polyester resins at high temperatures. Trigonox® 121 is preferred for the curing of UP resin based Hot Press Molding formulations (such as DMC and BMC) in the temperature range of 120-160°C as such or as a kicker in combination with a low reactive peroxide like e.g. Trigonox® C or Trigonox® 127. The low reactive peroxide must be included in the formulation in order to achieve a complete cure. Trigonox® 121 as such is in comparison with Trigonox® 21, tert-butyl peroxy-2 ethylhexanoate, somewhat faster and will in general result in a more efficient cure and a lower residual styrene content of the molded part. Trigonox® 121 has normally a much shorter pot life in the pure resin and is more reactive than Trigonox® C, tert-butyl peroxybenzoate.

CAS number
686-31-7

EINECS/ELINCS No.
211-687-3

TSCA status
listed on inventory

Molecular weight
230.3

Specifications

Active oxygen	6.60-6.95 %
Assay	≥ 95.0 %
Color	≤ 20 Pt-Co
Hydroperoxides as TAHP	≤ 0.10 %
Inorganic + organic hydrolysable chloride	≤ 100 mg/kg

Characteristics

Appearance	Clear liquid

Applications

Trigonox® 121 can be used for the market segments: polymer production, thermoset composites and acrylics production with their different applications/functions. For more information please check our website and/or contact us.

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	35°C
Emergency temperature (T_e)	25°C
Control temperature (Tc)	20°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.	5°C
Note	When stored according to these recommended storage conditions, Trigonox® 121 will remain within the Nouryon specifications for a period of at least 3 months after delivery.

Packaging and transport

The standard packaging is a 30-liter HDPE can (Nourytainer®) for 25 kg peroxide. Both packaging and transport meet the international regulations. For the availability of other packed quantities consult your Nouryon representative. Trigonox® 121 is classified as Organic peroxide type D; liquid, temperature controlled; Division 5. 2; UN 3115; PG II

Safety and handling

Keep containers tightly closed. Store and handle Trigonox® 121 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® 121. 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, Methane, tert-Amyl alcohol, Heptane, Ethane, Acetone,

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