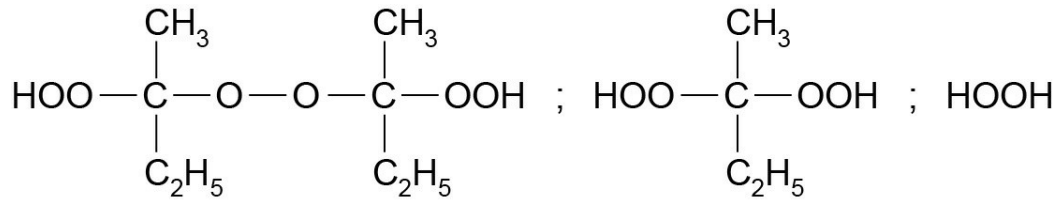


# Butanox M-50 VR

Methyl ethyl ketone peroxide



The work horse in GRP curing systems, including a VR system. Medium-reactive, general purpose methyl ethyl ketone peroxide (MEKP) with guaranteed low water content, used for curing unsaturated polyester resins in the presence of a cobalt accelerator at room and elevated temperatures.

**CAS number**  
1338-23-4

**EINECS/ELINCS No.**  
215-661-2

**TSCA status**  
listed on inventory

## Specifications

Appearance	Red liquid
Total active oxygen	8.8-9.0 %

## Characteristics

Density, 20 °C	1.180 g/cm <sup>3</sup>
Viscosity, 20 °C	24 mPa.s

## Applications

Butanox M-50 VR is a general purpose methyl ethyl ketone peroxide (MEKP) for the curing of unsaturated polyester resins in the presence of a cobalt accelerator at room and elevated temperatures. Butanox M-50 VR offers all the advantages of a standard MEKP i.e. Butanox M-50. The Butanox M-50 VR includes a vanishing red indicator system that in most cases virtually disappears during cure. The red color is there when you need it i.e. during the mixing step, but will disappear during cure. The curing system Butanox M-50 VR/cobalt accelerator is particularly suitable for the curing of gelcoat resins, laminating resins, lacquers and castings; moreover the manufacture of light resistant parts may be possible contrary to the curing system benzoyl peroxide/amine accelerator. Practical experience throughout many years has proven that by the guaranteed low water content and the absence of polar compounds in Butanox M-50 VR, this peroxide is very suitable in GRP products for e.g. marine applications.

## 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
Note	When stored under these recommended storage conditions, Butanox M-50 VR 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 25 kg peroxide solution. Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your Nouryon representative. Butanox M-50 VR is classified as Organic peroxide type D; liquid; Division 5. 2; UN 3105; PG II.

## Safety and handling

Keep containers tightly closed. Store and handle Butanox M-50 VR 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 Butanox M-50 VR. This information should be thoroughly reviewed prior to acceptance of this product. The SDS is available at <https://polymerchemistry.nouryon.com>.

## Major decomposition products

Carbon dioxide, water, acetic acid, formic acid, propionic acid, methyl ethyl ketone

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.