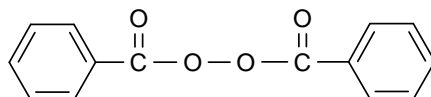




## Perkadox<sup>®</sup> L-W40

### Product description

Dibenzoyl peroxide  
40% suspension in water



Molecular weight	: 242.2
Active oxygen content peroxide	: 6.61%
actual product	: 2.61-2.71%
CAS No.	: 94-36-0
EINECS/ELINCS No.	: 202-327-6
TSCA status	: listed on inventory

Initiator for the (co)polymerization of styrene, acrylonitrile, vinylacetate, acrylates and methacrylates.

### Specifications

Appearance	: White homogeneous suspension
Assay	: 39.5-41.0%
Viscosity, 20°C	: 100-400 mPa.s

### Characteristics

Density	: 1.10 g/cm <sup>3</sup>
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### Half-life data

The reactivity of an organic peroxide is usually given by its half-life ( $t_{1/2}$ ) at various temperatures. The half-life of *Perkadox* L-W40 in chlorobenzene is:

0.1 hr	at 113°C
1 hr	at 91°C
10 hr	at 71°C

The half-life at other temperatures can be calculated by using the following equations and constants:

$$k_d = A \cdot e^{-E_a/RT}$$

$$t_{1/2} = (\ln 2)/k_d$$

$E_a = 122.35$ kJ/mole
$A = 6.94E+13$ s <sup>-1</sup>
$R = 8.3142$ J/mole·K
$T = (273.15 + ^\circ\text{C})$ K

### 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, AkzoNobel recommends a maximum storage temperature ( $T_s$  max.) for each organic peroxide product.

For <i>Perkadox</i> L-W40	$T_s$ max. = 30°C and
	$T_s$ min. = 0°C to prevent freezing

When stored according to these recommended storage conditions, *Perkadox* L-W40 will remain within the AkzoNobel specifications for a period of at least three months after delivery.

## Thermal stability

Organic peroxides are thermally unstable substances, which may undergo self-accelerating decomposition. The lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used for transport is the Self-Accelerating Decomposition Temperature (SADT). The SADT is determined on the basis of the Heat Accumulation Storage Test.

For *Perkadox* L-W40                      SADT : 60°C

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).

## Major decomposition products

Carbon dioxide, Benzene, Benzoic acid

## Packaging and transport

The standard packaging is a 30 l HDPE can (Nourytainer®) for 25 kg suspension. Delivery in a 1250 l plastic Intermediate Bulk Container is also possible in a number of countries.

Both packaging and transport meet the international regulations. For the availability of other packed quantities contact your AkzoNobel representative.

*Perkadox* L-W40 is classified as Organic peroxide type F; liquid, Division 5.2; UN 3109.

## Safety and handling

Keep containers tightly closed. Store and handle *Perkadox* L-W40 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 Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of *Perkadox* L-W40. This information should be thoroughly reviewed prior to acceptance of this product.

The MSDS is available at [www.akzonobel.com/polymer](http://www.akzonobel.com/polymer).

## Applications

### *Polymerization of acrylates and methacrylates*

*Perkadox* L-W40 can be used as initiator for the solution (co)polymerization of acrylates and methacrylates in the temperature range of 80-150°C, amongst others for the manufacture of coatings.

*Perkadox* L-W40 can also be applied as an initiator for the bulk and suspension (co)polymerization of acrylates and methacrylates.

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