

## NORPOL PEROXIDE 4

### DESCRIPTION

NORPOL PEROXIDE 4 is a Methyl Ethyl Ketone peroxide in phlegmatizer for the curing of unsaturated polyester resins at ambient temperature in combination with cobalt accelerators.

### APPLICATION

NORPOL PEROXIDE 4 features a reduced level of hydrogen peroxide compared to NORPOL PEROXIDE 1, and gives therefore a longer gel time which could be useful when the temperature in the workshop and resin increases during the summer period.

NORPOL PEROXIDE 4 is highly refined and substantially free of polar compounds such as water, hydrogen peroxide and methyl ethyl ketone. Due to this PEROXIDE 4 is also particularly useful in critical gelcoat applications. A reliable product of remarkable purity,

Using a standard type of pre-accelerated POLYLITE Polyester resin 1-1.5% NORPOL PEROXIDE 4 is normally added and for NORPOL Gelcoat/Topcoat 1.5-2%.

### PRODUCT DATA

Active oxygen	:	9.0 ± 0.1 %
Water content	:	1.0 %
Flash point (seta flash)	:	> 75°C
Supplied as	:	Liquid
Colour	:	Clear, colourless
Specific weight at 23°C	:	1.11-1.14 g/cm <sup>3</sup>
Colour	:	Water-white
Viscosity at 23°C	:	22-25 mPa·s
SADT	:	65°C
Solubility	:	Slightly soluble in water. Soluble in oxygenated organic solvents.
Storage stability	:	12 months

The information herein is general information designed to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to contents and suitability for their specific applications. We warrant that our products will meet our written specifications. **Nothing herein shall constitute any other warranty express or implied, including any warranty of merchantability or fitness for a particular purpose**, nor is any protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is limited to replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.

**PACKAGING**

Standard packing sizes are 5 kg and 25 kg net weight.

**CURE CHARACTERISTICS**

Resin: : POLYLITE 440-000      Resin temp: 21°C  
Acc.conc. : 1% ACCELERATOR 9802P  
PEROXIDE : 1%

Initiator	Gel time min	Time to peak min	Peak exotherm temp °C
<b>NORPOL PEROXIDE 4</b>	<b>20</b>	<b>62</b>	<b>47</b>
NORPOL PEROXIDE 1	11	48	47

A curing test with a gelcoat gave the following results

Method: Thin film cure (500um, wet film)      Temperature:  
23°C  
Gelcoat: Low VOC, ISO-NPG white spray gelcoat  
TTC: Tack-Free time      Initiator %: 2,0

Initiator	Gel time min	TTC min
<b>NORPOL PEROXIDE 4</b>	<b>31</b>	<b>110</b>
NORPOL PEROXIDE 1	19	113

**STORAGE**

- Storage at 25 °C or below is recommended. Storage below 20 °C is recommended for maximum shelf life.
- Store in original containers away from flammables and all sources of heat, sparks, or flames; out of direct sunlight; and away from promoters, accelerators, reducing agents and strong acids or bases.
- Leaking containers – Remove and isolate in safe area. Re-package or dispose (see later section) immediately.
- Never store in refrigerators containing food and/or beverages.

**HANDLING**

- Inform all personnel of procedures for safe handling and review SDS with them.
- Remove from storage area only the amount needed for one shift.
- Wear safety glasses or goggles and chemical resistant gloves.
- Keep away from heat, flames, and sparks.
- Avoid breathing vapours.
- Never add peroxides directly to promoters or vice-versa, violent decomposition can occur
- Prevent contamination such as contact with dust, over-spray, wood, and combustible material. Never allow contact with metal of any type except 304 or 316 stainless steel or equivalent.

**FIRST AID**

- EYES – Flush immediately with large amounts of fresh water and continue washing for at least 15 minutes. Medical attention is needed.
- SKIN – Wash with soap and water.
- INGESTION – Administer large amounts of milk or water and call a physician immediately for lavage. Do not induce vomiting.

**SPILLS**

- Clean up immediately by absorbing with inert material – vermiculite, perlite or sand.
- After absorbing, moderately wet immediately with water and place in a clean plastic bag lined, plastic pail.
- Dispose of immediately in accordance with local, state, and federal regulations. NOTE: Spilled peroxides, if not immediately cleaned up, can become contaminated and ignite or decompose in a vigorous manner.

**FIRE**

- This peroxide is hard to ignite, but burn vigorously with acceleration.
- Use water from a safe distance – preferably with a water-fog nozzle.
- For very small fires, an extinguisher with carbon dioxide, foam, or dry chemicals may be effective.
- In case of a fire in or near a storage area, cool stored containers with water spray.