

SUPEROX[®] 46-727 CUMYL HYDROPEROXIDE

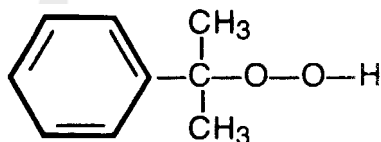
DESCRIPTION

Superox[®] 46-727 is a colorless to pale yellow liquid solution of cumyl hydroperoxide at a nominal 85% active ingredients. It is an economical free-radical initiator for unsaturated polyester resins, vinyl monomers and styrenation of oils and alkyds. Superox 46-727 may be used singly or in combination with other peroxides in both ambient and elevated temperature processes.

TYPICAL PROPERTIES

Cumyl Hydroperoxide	85 %
Active Oxygen	8.7 %
Form	Liquid
Density @ 25°C	1.05 gm/cc
Flash Point (SETA C.C.)	162°F/ 72°C
Soluble in	Alcohols, Ketones, Esters, Hydrocarbons
Slightly soluble in	Water

CHEMICAL STRUCTURE



Molecular Weight 152
Empirical Formula - C₉ H₁₂ O₂

THERMAL DECOMPOSITION

Temperature	159°C	190°C	230°C
Half-Life	10 hrs.	1.0 hr.	0.1 hr.

APPLICATION

Superox[®] 46-727 is especially suitable for the cure initiation of unsaturated polyester resin systems at both ambient and elevated temperatures. The typical exotherm curve exhibited is usually mild and flat leading to a gradual, but thorough, cure. This characteristic can minimize crazing and cracking especially in thick cross-sections. Superox 46-727 is normally used in pre-promoted resin systems employing cobalt and/or manganese compounds as the primary accelerators.

CAUTION: SUPEROX[®] 46-727 SHOULD NEVER BE MIXED WITH ACIDS OR DIRECTLY WITH PROMOTERS OR ACCELERATORS. A VIOLENT DECOMPOSITION CANN OCCUR WHICH MAY RESULT IN FIRE AND/OR EXPLOSION

Primarily, Superox[®] 46-727 is used in combination with higher exotherm producing peroxides when the normal operating temperature is under 180°F/ 82°C. These combinations will result in lower peak exotherms with the exact magnitude determined by the blend ratio. The use of Superox[®] 46-727 in the blend will lengthen the cure time but should not diminish the ultimate cure.

When operating at temperatures at over 180°F/ 82°C. The combinations will result in lower exotherm peroxide. Over 250°F/ 121°C, use of Superox 46-727 can give exotherms exceeding those normally expected for dibenzoyl peroxide or methyl ethyl ketone peroxide.

SUPEROX[®] 46-727

STORAGE

- Storage at 80°F or below is recommended. Storage below 70°F 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 **cobalt naphthenate**, other promoters, accelerators, oxidizing or reducing agents and strong acids or bases.
- **Leaking containers** – Remove and isolate in a safe area. Re-package or dispose immediately (see **spills**).
- **Never** store in refrigerators containing food and/or beverages.
- Consult National Fire Protection Association (NFPA) Code 432 and/or local regulatory agencies.
- Rotate stock, use oldest date first.

HANDLING

- Inform all personnel of procedures for safe handling and review MSDS 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 vapors.
- Dilution is not recommended.
- **Never** add 46-727 directly to promoters or vice-versa, violent decomposition can occur.
- Keep away from acids.

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. Do not induce vomiting. As an aid to the physician, suggest calling your local Poison Control Center.

SPILLS

- Clean up immediately by absorbing with inert non-acidic material – sand or soda ash, **do not use vermiculite**.
 - After absorbing, moderately wet immediately with water and place in a clean plastic bag inside a 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 hazardous, violent manner.

FIRE

- Peroxides ignite readily and 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 chemical may be effective.
- In case of fire in or near a storage area, cool stored containers with water spray.

PACKAGING, SHIPPING & AVAILABILITY

- The standard package sizes of Superox[®] 46-727 are cases of 4x8 lb. and 4x4 kg polyethylene bottles; and 40 lb. or 20 kg Hedpacks. For custom package sizes, please contact your local distributor or Syrgis Performance Initiators, Inc.
- Classification – Please refer to the specific Superox[®] 46-727 Material Safety Data Sheet under section 14, Shipping Description.
- Superox[®] 46-727 is available through a nation-wide distributor network. Call Syrgis Performance Initiators, Inc. for the name of the distributor in your area.

NOTE: MSDS's for all our products may be requested thru the website www.syrgisperformanceinitiators.com

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