# **ANDONOX PD-40S**

### DESCRIPTION

Andonox PD-40S is a clear solution of acetyl acetone peroxide (AAP), or 2, 4-Pentanedione peroxide in a phlegmatizer. Andonox PD-40S is a very effective polymerisation initiator for the room temperature cure of unsaturated polyester resins and gives exceptionally fast cures without significantly affecting gel times in most resin systems. This performance characteristic is especially beneficial in resin transfer moulding (RTM), cast polymers, and other applications requiring fast mould turnaround for production efficiencies.

Andonox PD-40S has the added advantage of being a low fire or explosion hazard.

# SPECIFICATIONS AND PROPERTIES

Active Oxygen  $4.5\% \pm 0.1$  Form Liquid

Colour Water white to straw Density at  $20^{\circ}$  1.09 - 1.12 g/cm<sup>3</sup> Viscosity at  $20^{\circ}$  15 - 17 cps Flash Point (Seta C.C.) > 65°C

Insoluble in Aromatic, chlorinated and aliphatic

hydrocarbons.

Soluble in Water, ethers, ketones, alcohols.

### APPLICATION

Andonox PD-40S is an extremely effective initiator for an accelerated cure without significantly shortening the gel time in many resin systems. Andonox PD-40S is best suited for singly promoted resins using cobalt promotion alone. Levels of cobalt (naphthenate or octoate in 6% solutions) should be in the range of 0.1 to 0.5%. In some cases, the addition of 0.1% to 0.3% diethyl- or dimethylaniline speeds the resin further and gives extremely high exothermic cures. The resin inhibitor type and level also has an important effect on the performance of Andonox PD-40S. In general, high inhibitor levels are usually not desirable, and use of some quaternary ammonium salts can cause significant yellowing of the resin. Also, quaternary ammonium compounds can have inhibiting effect on the resin system gel and cure properties.

# **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 cobalt naphthenate, other promoters, accelerators, oxidising or
  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 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 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.
- Avoid contact with materials other than polyethylene, polypropylene, Teflon, Tygon, or similar materials, glass or glass-lined steel, and 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 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**

- PD-40 is difficult to ignite, but will burn.
- 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 a fire in or near a storage area, cool stored containers with water spray.

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