

PRODUCT CODE : HARDENER / 04.27

Hardener 641

TYPE : Phenalkamine curing agent for epoxy resins.

DESCRIPTION : Ambient temperature curing hardener for high solids epoxy coatings.

| SPECIFICATIONS : | Hardener 641 | Hardener 641 XB 65 |
|---|---|--------------------|
| 1) Appearance | ←----- Clear brown viscous liquid-----→ | |
| 2) Viscosity @ 25 ⁰ C., poises | 200 - 350 | 1.0 - 1.5 |
| 3) Color value, gardner | 17 max. | 15 max. |
| 4) % Solids @ 120 ⁰ C for 2 hrs. | 95 min. | 60 - 70 |
| 5) Solvent | --- | Xylene : n-Butanol |
| 6) Amine value, mg of KOH/gm by HClO ₄ method | 290 - 325 | 195 - 215 |
| 7) Amine equivalent weight | 5.2 - 5.8 | 3.5 - 3.8 |
| 8) Mixing ratio with 100 parts of | | |
| 1) Synpol 200 | 65 - 70 | 42 - 46 |
| 2) Synpol 450XX | 18 - 23 | 12 - 15 |
| 9) Pot life with 100 gm Synpol 200 @ 25 ⁰ C, minutes | 50 - 80 | --- |

SOLUBILITY : Hardener 641 is soluble in aromatic hydrocarbons, higher alcohols, ketones and insoluble in aliphatic hydrocarbons and water.

Recommended Solvent combination for Hardener 641 along with Synpol 450 XX is as follows,

| | <u>Parts by weight</u> |
|-----------|------------------------|
| Xylene | 40 |
| n-Butanol | 20 |
| MEK | 20 |
| MIBK | 20 |

COMPATIBILITY : Hardener 641 is compatible with all grades of modified and unmodified liquid epoxy resins and also compatible with reactive polyamides, aliphatic and aromatic amine based epoxy adduct hardeners.

APPLICATIONS : Hardener 641 offers outstanding features such as solvent free or high solids systems, cures completely even in presence of moisture and at low ambient temperatures, non critical mixing ratio, adequate adhesion on poorly prepared surfaces and even on plastics, high water and chemical resistance.

Hardener 641 is recommended in combination with epoxy resin, Synpol 450 XX for heavy duty maintenance coatings, anti-corrosive coatings, especially for marine coatings. It offers superior chemical resistance and adequate flexibility in above applications. Further it offers very good handling characteristics, fast cure rates and safer handling properties. It also finds further application in masonry coatings, tank and pipe coatings, concrete repair coatings and in certain adhesive applications.

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MATERIAL SAFETY DATA :

| | | |
|--|--|--------------------|
| Product name | Hardener 641 | Hardener 641 XB 65 |
| Flash point ° C. (Abel closed cup) | Above 105 | 30 |
| Flammability | Combustible. | Moderate fire risk |
| Toxicity | Moderate toxic. Avoid contact with skin. It may cause dermatitis in sensitive people. If it is exposed to skin, it should be washed off with soap and water. | |
| Handling | Keep away from sources of ignition, provide all electric connections of flameproof design. Wear safety glasses, rubber gloves and protective clothings. | |
| Emergency treatment and measures | | |
| 1 Hygienic precautions | Adequate ventilations. | |
| 2 Hygienic treatments (First Aid) | Flush eyes thoroughly with water. Apply ophthalmic cortisone for conjunctivitis and keratities. Wash out contaminated skin with soap and water. Gastric lavage (stomach wash), if swallowed, followed by saline catharsis. | |
| 3 Fire precautions (in case of outbreaks) | Use dry chemical or carbon dioxide. Water spray may help to keep containers cool, to dilute leaked resins and to diffuse vapours. | |
| Spills and leakage | Absorb liquid materials in sand and collect solid material and burn under hood in incinerator. | |
| Disposal and waste treatment | Spray into furnace under controlled conditions. | |

STORAGE :

Hardener 641 will absorb moisture and react with carbon dioxide from the air, if left in open containers. Therefore Hardener 641 must be stored in its original airtight container in cool place under shade and must not be exposed to undue heat or humidity. The properties are so adjusted to have storage stability of minimum 6 months.

PACKING :

25 kgs. M.S. drums, 50 kgs. Plastic carboys and 200 kgs. M.S. barrels.

DISCLAIMER :

Information in this literature is to the best of our knowledge true and accurate. However, since conditions under which our products may be used are beyond our control, recommendations are made without warranty or guarantee.

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