

Cardolite® LITE 3040

Epoxy Curing Agent

Preliminary Technical Datasheet

DESCRIPTION

Cardolite LITE 3040 is a solvent free, light color, low viscosity phenalkamide curing agent suitable for high solid epoxy coating applications. Phenalkamide curing agent technology is chemically designed to give coatings a combination of the benefits of both polyamide and phenalkamine systems. This curing agent offers advanced performance such as fast and low temperature cure, good dry color stability, and extended overcoat window in addition to excellent water resistance, adhesion, flexibility, and appearance at high humidity.

PROPERTIES

| PROPERTY | PROVISIONAL SPECIFICATION | TEST METHOD |
|--------------------------|---------------------------|---------------|
| Color (Gardner) | ≤ 11 | ASTM D1544 |
| Viscosity @ 25°C (cPs) | 4,000 - 6,000 | ASTM D2196 |
| Amine Value (mg KOH/g) | 360 - 400 | ASTM D2074 |
| Volatile Loss (% weight) | ≤ 3.0 | ASTM D2369-98 |

| PROPERTY | TYPICAL VALUE | TEST METHOD |
|--|--------------------------|-------------|
| Appearance | Amber liquid | Visual |
| Theoretical Active Hydrogen Equivalent (AHEW) ¹ | 118 | Calculated |
| Density @ 25°C (kg/L) (lbs/gal) | 0.974 8.11 | ASTM D1475 |
| Recommended Use Level (phr, EEW 190) | 50 - 70 (55 recommended) | |
| Shelf Life (months) | 12 | |

¹ Based on total product weight

APPLICATIONS

Cardolite LITE 3040 is suitable for fast curing very high solids general purpose marine, industrial, floor, and protective coatings. This product's quick hardness development and long pot life make it ideal for applications requiring fast return to service or multiple coats over a short period of time. It can be used for coating applications under cold and humid conditions, and provides excellent corrosion protection. Excellent flexibility, adhesion on various metal/primed substrates, and early water resistance make this curing agent especially suitable for marine, transportation, and general industrial equipment coatings. Its low viscosity enables lower emission coatings and improves system workability. Applications requiring the speed and corrosion protection of a phenalkamine that need better dry color stability, flexibility and extended recoat interval can benefit from this curing agent.

ADVANTAGES

- Excellent combination of rapid cure and long pot life at both ambient and low (5°C/40°F) temperatures
- Light dry and wet color for broad color range and use in tinting systems
- Low viscosity for excellent workability and low V.O.C.
- Fast hardness development
- Excellent overcoatability
- Excellent flexibility and impact resistance
- Excellent chemical resistance
- Compatible with most epoxy resins, solvents and their blends
- Excellent corrosion resistance and early water resistance
- Non-critical mix ratio
- Non-toxic
- Based from natural, renewable, non-food chain raw material feedstock

CURE PROPERTIES

| | FORMULATION A* | TEST METHOD |
|--|----------------|-------------|
| Liquid Epoxy Resin (pbw, EEW 190) | 100 | |
| Cardolite LITE 3040 (pbw) | 55 | |
| Mix viscosity @ 25°C (cPs) | 12,000 | |
| Gel time, 50 g @ 25°C (min) | 110 | NTM-15 |
| Thin film dry times, WFT 8 mils (200 micron) | | |
| @ 25°C (77°F) (hrs hard/through) | 7.25/11.0 | ASTM D5895 |
| @ 5°C (41°F) (hrs hard/through) | 29.0/38.0 | ASTM D5895 |
| Film appearance @ 10°C, 92% RH | Slightly Hazy | Visual |

*20 to 30 min induction time recommended

REGULATORY STATUS

Please refer to the material safety data sheet (MSDS). Specific information regarding chemical inventory listing can be obtained from your local sales representative.

SAFETY PRECAUTIONS

Please refer to the material safety data sheet (MSDS). Copies of the MSDS can be requested on the Cardolite website or via your local sales representative.

STABILITY AND STORAGE

Cardolite products may absorb moisture and carbon dioxide when left in open containers, which could result in increased viscosity, discoloration, reduction of reactivity, and/or crystallization of the products. These products should be kept tightly sealed in their original containers when not in use, and stored in a cool, dry place.

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