CYMEL® NF 3030

Technical Datasheet

be ECOWISE™

CYMEL® NF 3030 belongs to the ECOWISE CHOICE product range for the industrial wood market.

PRODUCT DESCRIPTION

CYMEL® NF 3030 resin is a formaldehyde-free crosslinking agent supplied in water. It was designed primarily for use in 2 component, ambient or forced cure, water-borne conversion varnishes for industrial wood when formulated with VIACRYL® SC 6834w/42WA amine-free acrylic emulsion. Resulting formulas exhibit superior catalyzed pot life relative to isocyanate-based conversion varnishes. The resulting coatings have excellent appearance, early hardness, resistance properties, and hot/cold cycle flexibility.

BENEFITS

- Does not contain formaldehyde
- Does not emit formaldehyde during curing process
- Excellent compatibility with a variety of OH functional resins
- Fast cure response in ambient and heat cure applications
- Extended catalyzed coating stability or pot life in 2K systems.

APPLICATION AREAS

- Industrial wood coatings

PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Pale yellow to amber	Visual
Non-volatile by wt.	40-45%	DIN EN ISO 3251 (Pan, 1 hr/125°C)
Viscosity, 23°C	< 300 mPa·s	DIN EN ISO 3219

SOLUBILITY

Alcohols	Partially Soluble
Esters	Insoluble
Ketones	Insoluble
Aromatic hydrocarbons	Insoluble
Water	Soluble

COMPATIBILITY

Acrylic resins	Excellent
Alkyd resins	Excellent
Polyester resins	Excellent

BACKBONE POLYMER SELECTION

CYMEL® NF 3030 resin is an effective crosslinking agent for alkyd, polyester and acrylic polymers containing primary hydroxyl functionality. Reactivity with secondary hydroxyl sites is limited under ambient cure. CYMEL® NF 3030 resin has a high Tg and should be paired with softer polyols (Tg < 30°C) to avoid film checking or cracking. The equivalent weight of CYMEL® NF 3030 is ~85 g/eq (solids basis). Binder ratios can vary from 85/15 to 70/30 depending upon the equivalent weight of the polyol.

CATALYSIS

For ambient or low bake applications, it is recommended to use 1.0% CYCAT® 4040 catalyst based on weight of total binder solids. For high bake applications, the addition of catalyst isn't required as long as the acid number of the primary film former is > 5.

STORAGE STABILITY

CYMEL® NF 3030 resin has a shelf life of 180 days from the date of manufacture when stored at temperatures between 5°C and 32°C. Avoid freezing.