

PRODUCT DESCRIPTION

CYMEL® 370N resin is a methylated melamine-formaldehyde crosslinking agent with a medium degree of alkylation, a high methylol content and low imino functionality.

CYMEL® 370N resin is partially water soluble and has an excellent compatibility with water soluble backbone polymers. The carboxyl functionality of anionic backbone polymers is sufficiently acidic to catalyse the reaction at relatively low temperature curing schedules. This makes CYMEL® 370 resin suitable for a wide range of water borne industrial stoving finishes.

BENEFITS

- Fast cure response
- High solids
- Partially water soluble
- Good compatibility water soluble anionic polymers, dispersions and emulsions

APPLICATION AREAS

- WB general industrial coatings for faster cure
- Automotive coatings
- Coil and container coatings

PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear Liquid	Visual
Non-volatile by wt.	88 ± 2%	Foil, 45 min/45°C
Viscosity, 25°C	Z2 – Z4	Gardner Holdtz Method
Free formaldehyde	≤ 2.5%	ISO 11402
Color, Gardner	≤ 1	ISO 4630-2
Solvent	i-butanol/i-propanol=1/2	

SOLUBILITY

Alcohols	Complete
Esters	Complete
Ketones	Complete
Aromatic hydrocarbons	Partial
Aliphatic hydrocarbons	Insoluble
Water	Partial

COMPATIBILITY

Acrylic resins	Very good
Alkyd resins	Very good
Epoxy resins	Very good
Polyester resins	Very good

BACKBONE POLYMER SELECTION

CYMEL® 370N resin is a very effective crosslinking agent for backbone polymers containing hydroxyl, amide and, to some extent, carboxyl functionality, such as epoxy, alkyd/polyester or acrylic resins. The self-condensation reaction takes preference over the crosslinking reaction. Higher film hardness can easily be obtained by raising the concentration of amino crosslinker.

CATALYSIS

CYMEL® 370N resin may not require the addition of an acid catalyst to the formulation to obtain effective cure. In many instances, the acidity of the backbone polymer in the formulation is sufficient to catalyze the reaction under normal baking conditions (15 - 20 minutes at 120 - 150°C). The cure can be additionally catalyzed with weak organic or inorganic acids such as CYCAT® 296-9 catalyst, which has proved to be a very effective catalyst for these systems.

FORMULATION STABILITY

Formulated systems containing CYMEL® 370N resin have to be stabilized with primary alcohols, amines or with a combination of these. For water borne systems a pH between 7.0 - 8.5 should be maintained to achieve stability.

STORAGE STABILITY

CYMEL® 370N resin has a shelf life of 360 days from the date of manufacture when stored at temperatures below 30°C. Although lower temperatures are not detrimental to stability, its viscosity will increase, possibly making the resin difficult to pump or pour. The viscosity will reduce again on warming, but care should be taken to avoid excessive local heat as this can cause an irreversible increase in viscosity. The expiration date may be extended and COA updated after QC testing of retained samples, only for material in allnex possession.