CYMEL® 701

Technical Datasheet

PRODUCT DESCRIPTION

CYMEL 701 resin is a methylated high imino melamine-formaldehyde resin. CYMEL 701 resin has good aromatic hydrocarbon tolerance and water dilutability.
The reactivity of CYMEL 701 resin is high and has high tendency to self-condense, that may be used to increase the hardness and resistance properties of thermoplastic solvent borne and water borne polymers.

BENEFITS

- Very fast cure response
- No strong catalyst required
- Water soluble
- High film hardness

APPLICATION AREAS

- High solids & water-borne coatings
- Automotive base coat
- Coil-coating & Metal deco finishes
- General purpose coatings

PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear Liquid	Visual
Non-volatile by wt.	82 ± 2%	Foil, 45 min/ 45°C
Viscosity, 25°C	W-Z3	Gardner Holdtz Method
Free formaldehyde	≤ 3.5%	Sulfite Method
Color, Gardner	≤ 1	ISO 4630-2
Solvent	iso-butanol	

SOLUBILITY

Alcohols	Complete
Esters	Complete
Ketones	Complete
Aromatic hydrocarbons	High
Water	Complete

COMPATIBILITY

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

CATALYSIS

CYMEL 701 resin requires weak acid catalysis for cure. The acidity of primary film former is usually sufficient of normal baking schedules. The cure can additionally be catalyzed with weak organic or inorganic acids such as maleic, citric, phosphoric or alkyl phosphoric acids, or low level of strong acid such as p-toluene sulfonic acid. CYCAT 296-9 catalyst* is recommended for increasing the low temperature cure response of CYMEL 701 resin systems.

*Product of allnex.

FORMULATION STABILITY

The stability of solvent-borne systems containing CYMEL 701 resin can be enhanced by the addition of primary alcohols, amines, or a combination of these. Low molecular weight primary alcohols such as ethanol and n-butanol are most effective. Recommended amines are TEA, DMEA or 2-AMP at a concentration of 0.5 - 1.0% on total binder solids.

STORAGE STABILITY

CYMEL 701 resin has a shelf life of 360 days from the date of manufacture when stored at temperatures between 5°C and 25°C packed in unopened original containers. CYMEL 701 resin must be kept indoors and avoided the direct sunlight exposure.
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.

SAFETY AND HANDLING

Please consult the Safety Data Sheet (SDS) for safety, health, and environmental data available from allnex.