

# CYMEL<sup>®</sup> MB-98 resin

## PRODUCT DESCRIPTION

CYMEL MB-98 resin is a butylated melamine crosslinker with high degree of alkylation and very low free formaldehyde. It has been specially designed to improve the resistance properties of urea-based acid curing wood coating formulations.

## BENEFITS

- Very high solids content
- Good chemical resistance
- High film build
- Very low free formaldehyde

## APPLICATION AREAS

- Industrial wood finishes

## PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear Liquid	Visual
Non-volatile by wt.	97 ± 2%	Pan, 1 hr/100°C
Viscosity, 23°C	1700-4500 mPa·s	Dynamic
Free formaldehyde	< 0.1%	Sulfite
Color, APHA	< 100	ISO 6271

## SOLUBILITY

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

## COMPATIBILITY

Acrylic resins	Good
Alkyd resins	Very good
Polyester resins	Good
Epoxy resins	Good
Nitrocellulose	Fair
Cellulose acetate butyrate	Good
Polyvinyl butyral	Good

## BACKBONE POLYMER SELECTION

CYMEL MB-98 resin is a very effective crosslinking agent for backbone polymer resins containing hydroxyl functional groups, such as alkyd, polyester or acrylic resins. The optimum level of CYMEL MB-98 resin in an acid curing wood coating formulation should be in the range of 25-35% on total resin solids if used as the sole crosslinker. Loadings of 5-10% on total resin solids is recommended when used in combination with a urea resin.

## CATALYSIS

CYMEL MB-98 resin responds best to sulfonic acid catalysts, like CYCAT<sup>®</sup> 4040 catalyst. Generally, 6-10% CYCAT 4040 catalyst on total resin solids of the formulation is sufficient to obtain fast drying behavior at room temperature.

## POT LIFE

To extend catalyzed pot life of the formulation, addition of primary alcohols, such as n-butanol and ethanol, is required at concentrations of 10-25% on total resin solids. Faster evaporating alcohols will improve speed of dry.

## STORAGE STABILITY

CYMEL MB-98 resin has a shelf life of 4 years from date of manufacture when stored at temperatures between 5°C and 32°C. Although lower temperatures are not detrimental to stability, the viscosity of the product will increase making the resin more difficult to pump or pour. Product viscosity can be returned to normal by gentle re-warming, however, care should be taken to avoid excessive localized heating as this can cause an irreversible increase in viscosity.

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