

## PRODUCT DESCRIPTION

CYMEL UB-90-BX resin is a partially n-butylated urea crosslinker supplied in a mixture of n-butanol and xylene. Its fast reaction speed combined with excellent adhesion properties makes CYMEL UB-90-BX resin suitable for a wide range of industrial baking applications where electrostatic spray application is required.

## BENEFITS

- Very fast reaction speed
- High electrostatic resistivity
- Very good adhesion properties

## APPLICATION AREAS

- General industrial baking formulations
- Drum coating formulations
- Electrostatic spray applications

## PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear Liquid	ASTM E284
Non-volatile by wt.	65 ± 2%	DIN EN ISO 3251 (Pan, 1 hr/100°C)
Viscosity, 23°C	700 – 1100 mPa.s	DIN EN ISO 3219
Free formaldehyde	< 0.7%	Sulfite Titration
Color, APHA	< 50	DIN EN ISO 6271

## SOLUBILITY

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

## COMPATIBILITY

Acrylic resins	Medium
Alkyd resins	Good
Polyester resins	Good
Epoxy resins	Good

## BACKBONE POLYMER SELECTION

CYMEL UB-90-BX resin is a very effective crosslinking agent for backbone polymer resins containing hydroxyl, carboxyl, and amide functional groups, such as those found on alkyd, polyester or acrylic resins. It has good compatibility over a broad range of polymer backbone resins providing films with very good flow, gloss, film hardness, and adhesion properties on metal substrates. Although the optimum level of CYMEL UB-90-BX resin in a given formulation should be determined experimentally, ratios between 25% and 35%, based on resin solids, are typically most effective.

## CATALYSIS

CYMEL UB-90-BX 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). If catalyst addition is required, then 0.5 - 1.0% of CYCAT® 4040 catalyst or CYCAT 296-9 catalyst based on total resin solids is recommended.

## FORMULATION STABILITY

The stability of formulated systems containing CYMEL UB-90-BX resin can be enhanced by the addition of alcohols, amines or a combination of these. Low molecular weight primary alcohols such as ethanol and n-butanol are most effective. Recommended amines are triethylamine or dimethylethanolamine at a concentration of 0.5 - 1.0% on total binder solids.

## STORAGE STABILITY

CYMEL UB-90-BX resin has a shelf life of 1440 days from date of manufacture when stored at temperatures below 32°C. Although lower temperatures are not detrimental to stability, the viscosity of the product will increase, potentially making the resin difficult to pump or pour. Product viscosity can be returned to normal by gentle rearming, however, care should be taken to avoid excessive localized heating which can result in premature thickening. 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 for safety, health, and environmental data.