PRODUCT DESCRIPTION

CYMEL® UB-30-B resin is a n-butylated urea crosslinker supplied in n-butanol. Its fast film hardness development combined with excellent adhesion properties makes CYMEL® UB-30-B resin suitable for a wide range of industrial baking applications.

BENEFITS

- Very fast film hardness development
- Very good adhesion properties

APPLICATION AREAS

- Primer formulations
- General industrial baking formulations

PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear Liquid	Visual
Non-volatile by wt.	65 ± 2%	Pan, 1 hr/100°C
Viscosity, 23°C	13000 – 25000 mPa.s	Dynamic Viscosity
Free formaldehyde	~0.6%	Sulfite Method
Color, APHA	< 50	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
Nitrocellulose	Good
Cellulose acetate butyrate	Good
Polyvinyl butyrate	Good

BACKBONE POLYMER SELECTION

CYMEL® UB-30-B 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-30-B resin in a given formulation should be determined experimentally, ratios between 25% and 35%, based on resin solids, are typically most effective.

CATALYSIS

CYME®L UB-30-B 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-30-B 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 TEA, DMEA or 2-AMP at a concentration of 0.5 - 1.0% on total binder solids.

STORAGE STABILITY

CYMEL® UB-30-B resin has a shelf life of 24 months from date of manufacture when stored at temperatures between 5°C and 30°C. Although low 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 irreversible viscosity increase.