MYCOAT® 715

Technical Datasheet

PRODUCT DESCRIPTION

MYCOAT 715 resin is a methylated high imino melamine crosslinker supplied in 1-butanol. MYCOAT 715 resin is very reactive and has a tendency towards self-condensation at normal baking temperatures, providing films with very good hardness, gloss, chemical resistance and outdoor durability. Its major advantage relative to other high imino resins is its potential to lower VOCs in high solids formulations.

BENEFITS

- High solids
- Fast law temperature cure response
- Low formaldehyde release

APPLICATION AREAS

- High solid coatings
- Waterborne coatings
- Coil coatings and metal decorating
- Automotive coatings

PHYSICAL PROPERTIES

Appearance	Clear Liquid	Visual
Non-volatile by wt.	80 ± 2%	Pan, 180 min/105°C
Viscosity, 25°C	Y-Z	Gardner Holdtz Method
Free formaldehyde	< 0.55%	BS-EN-1243-2011
Color, Gardner	≤ 1	ISO 4630-2
Solvent	n-butanol	

SOLUBILITY

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

COMPATIBILITY

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

BACKBONE POLYMER SELECTION

MYCOAT 715 resin is an effective crosslinker for backbone polymer resins containing hydroxyl, carboxyl, and amide functional groups, such as those found on alkyd, polyester or acrylic resins. Although the optimum level of MYCOAT 715 resin should be determined experimentally, ratios of 25 to 35% based on resin solids are typically most effective.

CATALYSIS

MYCOAT 715 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® 296-9 catalyst based on total resin solids is recommended.

FORMULATION STABILITY

The stability of solvent-borne systems containing MYCOAT 715 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. For best stability in waterborne systems, a pH between 7.5 - 8.5 should be maintained using tertiary amines only.

STORAGE STABILITY

MYCOAT 715 resin has a shelf life of 540 days from the date of manufacture when stored at temperatures between 5°C and 25°C packed in unopened original containers. MYCOAT 715 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.