

PRODUCT DESCRIPTION

MYCOAT 159 resin is a methylated benzoguanamine-formaldehyde crosslinking agent in 2-n-butoxy ethanol (n-butyl cello solve) and ethylene glycol mono-isopropyl ether with high imino functions developed primarily for use as a crosslinking agent in waterborne can coatings requiring high water resistance and high flexibility. MYCOAT 159 does not require a strong acid catalyst for fast cure response. The formulation by using MYCOAT 159 resin and water-soluble backbone resin can get high gloss film like solvent borne type.

Though MYCOAT159 resin has hydrophilic group, excellent retort resistance is shown because of high cure response and having phenyl group.

BENEFITS

- Low blistering tendency
- Fast low temperature cure response
- Low formaldehyde release
- Strong acid catalyst is not required
- Excellent compatibility with resins
- Superior water and retort resistance
- Good balance of hardness and flexibility

APPLICATION AREAS

- General industrial coating for primer
- External can coatings

PHYSICAL PROPERTIES

Appearance	Clear Liquid	Visual
Non-volatile by wt.	77 ± 2%	Pan, 180 min/105°C
Viscosity, 25°C	Z - Z41	Gardner Holdtz Method
Free formaldehyde	< 0.3%	Sulfite Method
Color, Gardner	≤ 1	ISO 4630-2
Solvent	2-n-butoxy ethanol (n-butyl cellosolve) and ethylene glycol mono-isopropyl ether	

SOLUBILITY

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

COMPATIBILITY

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

BACKBONE POLYMER SELECTION

MYCOAT 159 resin is a very effective crosslinking agent for backbone polymers containing hydroxyl, carboxyl or amide functional groups such as epoxy, alkyd/polyester or acrylic resins.

CATALYSIS

MYCOAT 159 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 159 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 159 resin has a shelf life of 1 year from the date of manufacture when stored at temperatures between 5°C and 30°C. 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.