Acronal® TC 1015 na

Product Description

Acronal TC 1015 na is a self-condensing emulsion under baking conditions for formaldehyde free systems.

Key Features & Benefits

- Formaldehyde free
- Adhesion to metals and glass
- Outstanding chemical resistance
- Low VOC enabler
-Overcoatability

Chemical Composition

Acid and hydroxyl functional emulsion polymer

Properties

Typical Properties

Appearance		white emulsion
Solids	% by wt	49-51
pH		~ 3.5
Viscosity at 23°C	cps	~ 500
Density	g/ml	1.06
Acid value (calculated on solids)	mg KOH/g	300
Hydroxyl value (calculated on solids)	mg KOH/g	120
MFFT	°C	< 0
Freeze-thaw stable		No

These typical values should not be interpreted as specifications.

Applications

Acronal TC 1015 na is a self-condensing emulsion for formaldehyde-free stoving coatings with high chemical resistance and strong adhesion properties to metal and glass. Baking of the system is required for performance.

Coatings formulated with Acronal TC 1015 na are hard and offer scratch and chemical resistance.

Acronal TC 1015 na is recommended for applications such as:

- General industrial topcoats for chemical resistance on metal and glass
- Rigid packaging coatings

Formulation Guidelines

Since Acronal TC 1015 na is a shear-stable product, pigments can be dispersed into it. Dispersing agents are recommended in most formulations.

Although the film formation temperature is very low for Acronal TC 1015 na, cosolvent for maximizing gloss and further supporting film formation during baking is recommended.

Acronal TC 1015 na is a low pH emulsion, therefore use of low pH stable additives are required. This includes use of surfactants, dispersants, thickeners, defoamers and performance additives (such as antioxidants or light stabilizers). To avoid disruption of the curing mechanism, a pH of <5 should be adhered to and avoidance of highly basic additives and fillers should be avoided.

Recommendations for an antioxidant include Irganox® 1010-DW and a light stabilizer package includes a combination of Tinuvin® 400-DW ECO and Tinuvin 123-DW ECO.

For modification of properties of finished films, Acronal TC 1015 na may be combined with other reactive resins including epoxies, melamine-formaldehyde resins, urea-formaldehyde, or isocyanates to enable cure at lower temperatures. Testing must be completed by formulators to ensure adequate performance.

Application

For maximal performance, a recommended baking schedule of at least 160°C is required. Higher temperatures can influence cure speed and response. Temperatures up to 300°C are suitable for fast curing (1 minute or less).

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Acronal TC 1015 na.

Storage

Please refer to the “Handling and Storage of polymer dispersions” brochure.

Important

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BASF Corporation
Dispersions and Resins
11501 Steele Creek Road
Charlotte, North Carolina 28273
Phone: (800) 251 – 0612
Email: CustCare-Charlotte@basf.com
Email: edtech_info@basf.com
www.basf.us/dpsolutions