

## POLYTONE™ SYNTHETIC RESINS

### Urea Aldehyde Resin

TECHNICAL DATA	POLYTONE™ UA 810
Chemical Classification	Urea & Aliphatic Aldehyde Condensation Resin
Physical Form	Lumps
Softening Point (Ball & Ring Method )	80° C – 95 ° C
Iodine Color Number	≤ 3
Hydroxyl Value	~ 40 mg KOH / gm resin
Acid Value	3 mg KOH / gm resin ( Max )
Saponification Value	~ 65 mg KOH / gm resin
Tg	~ 57 ° C

#### Properties & Usage

**POLYTONE™ UA 810 is an aldehyde resin for pigment dispersions.**

- Promotes the natural grain and color of wood.
- Has Good elasticity, adhesion and hardness.
- Has excellent toughness

POLYTONE™ UA 810 is a pale, yellowing-resistant aldehyde resin that is soluble in almost all paint solvents and compatible with practically all coatings raw materials. Its main uses are combination with other resin binders and the production of all-purpose pigment

Because of its excellent solubility and compatibility, POLYTONE™ UA 810 can be used in many types of coating formulations. Depending on the application, it improves gloss, hardness, body adhesion and resistance to yellowing.

POLYTONE™ UA 810 is very heat stable and can be used in baking finishes, neither causing odor nor discoloration.

#### Applications

POLYTONE™ UA 810 can be used to improve gloss, hardness, body, adhesion and yellowing resistance, depending on the coating's intended application

A very pale color and good pigment wetting are two properties that make POLYTONE™ UA 810 particularly suitable for producing all purpose pigment content pastes to be produced.

Sine it has good heat resistance, POLYTONE™ UA 810 is also used for baking finishes, particularly since it does not cause any odors or discoloration of the resin

POLYTONE™ UA 810 is recommended for applications such as

- Interior/exterior general industrial metal coating applications
- Automotive OEM applications

*Alkyd Resins, Air & Oven Drying*

- Partial replacement of upto 20% solids on solid
- Improvement of resistance to yellowing through excellent heat stability and lightfastness
- Improvement of hardness, gloss, body & flow
- Cost reduction
- Use as modifying component in alkyd resin production

**Applications**

*Universal pigment pastes*

- Suitable as grinding resin because of broad compatibility and universal solubility, low solution viscosity, high pigment binding capacity and transparency.

*Powder Coatings*

- Partial replacement of up to 15% of epoxy/polyester or PUR powder
- Improvement of flow due to low melt viscosity.

*Hot melts for road marking and spray plastics*

- Suitable as basic resin in combination with suitable plasticizers due to low melt viscosity, good light fastness and stability
- Improves adhesion to substrates.

**Solubility**

POLYTONE™ UA 810 is soluble in alcohols, esters, ketones, aromatic hydrocarbons and in all common paint solvents but insoluble in water. Its solubility/diluent tolerance in aliphatic solvents such as mineral spirit is limited. Such solutions tend to separate, particularly at temperatures below 15 ° C, but can be stabilized by the addition of 2-5 % of an aromatic solvent.

**Compatibility**

POLYTONE™ UA 810 is compatible with many coatings raw material including

- alkyd resin
- cellulose nitrate
- cellulose acetobutyrate
- vinyl chloride copolymers
- chlorinated rubber
- hydroxypolyacrylates
- melamine-formaldehyde resins
- urea-formaldehyde resins
- aromatic and aliphatic epoxy resins
- hydrocarbon resin
- phthalate plasticizers
- acrylic resin

**Packaging**

Available in 25 Kg bags

**Shelf Life**

Store under cool dry conditions. It is recommended that the material be used within 12 months from the date of manufacture