



## POLYTONE™ UA 810

Aldehyde Resin

An Aldehyde Resin which is yellowing resistant, practically soluble in almost all paint solvents and compatible with almost all coating raw material.

## ALDEHYDE RESINS

The traditional Aldehyde Resins produced from auto-condensed aldehydes are very rarely used in coatings. The same is not true of Urea modified aldehyde resins. Which as well as being used as coating additive to improve gloss, body and UV resistance, are known as ideal “grinding resins” for pigment pastes because of their high pigment binding power and universal compatibility. Its used in combination with other resin binders to improve its properties and production of all purpose pigment paste.

## PROPERTIES

<b>Chemical Classification</b>	Urea & Aliphatic Aldehyde Condensation Resin
<b>Physical Form</b>	Lumps
<b>Softening Point (Ball &amp; Ring Method )</b>	80° C – 95 ° C
<b>Iodine Color Number</b>	≤ 3
<b>Hydroxyl Value</b>	~ 40 mg KOH / gm resin
<b>Acid Value</b>	3 mg KOH / gm resin ( Max )
<b>Saponification Value</b>	~ 65 mg KOH / gm resin
<b>Tg</b>	~ 57 ° C

## SOLUBILITY

	<b>POLYTONE™ UA 810</b>
<b>Alcohols</b>	●
<b>Esters</b>	●
<b>Ketones</b>	●
<b>Aromatic Hydrocarbons</b>	●
<b>Aliphatic Hydrocarbons</b>	⊙ (Limited Tolerance. Tends to separate, particularly below 15° . Can be stabilized by adding 2-5 % of Aromatic Solvent)
<b>Water</b>	⊖

- Soluble
- ⊙ Limited Solubility
- ⊖ Insoluble

## COMPATIBILITY

	POLYTONE™ UA 810
Acrylic Resins	●
Alkyd Resins	●
Aromatic & Aliphatic Epoxy Resins	●
Cellulose Nitrate/Nitro Cellulose	●
Cellulose Acetobutyrate/CAB	●
Chlorinated Rubbers	●
Epoxy Resin	●
Ethyl Cellulose	⊙
Hydrocarbon Resin	●
Hydroxypolyacrylate	●
Melamine Formaldehyde Resin	●
Phthalate Plasticizers	●
Urea Formaldehyde Resin	●
Vinyl Chloride Co Polymers	●

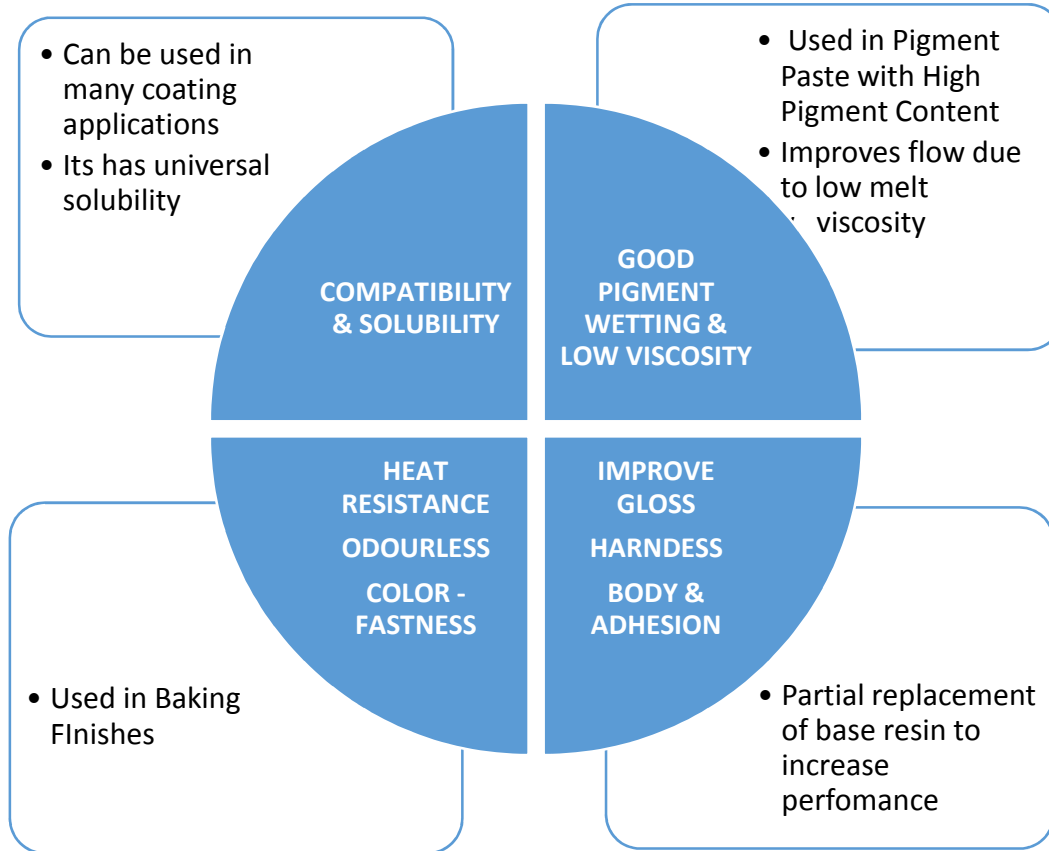
● Fully Compatible  
 ⊙ Limited Compatible  
 ⊖ Not Compatible

## PERFORMANCE

	POLYTONE™ UA 810
Colorless	● ● ● ● ●
Pigment Binding Capacity	● ● ● ● ●
Pigment Wetting Capacity	● ● ● ● ●
Compatibility	● ● ● ● ●
Heat Resistance	● ● ● ● ●
Brightness	● ● ● ● ●
Weather Fastness/Weather Resistance	● ● ● ● ●
Fastness to Light	● ● ● ● ●
Rheological Properties	● ● ● ● ●
Soluble in Alcohol	● ● ● ● ●
Soluble in Aliphatic Hydrocarbon	● ● ●
Suitability for Coatings Resistant to Water	● ● ●
Suitability for Coatings Resistant to Mineral Oil	● ● ● ●
Suitability for Coatings Resistant to Saponification	● ● ●
Solvent Release	● ● ●

● ● ● ● ● : Very Good  
 ● ● ● ● : Good  
 ● ● ● : Fair  
 ● ● : Poor  
 ● : Insufficient

## BENEFITS



## APPLICATIONS

### UNIVERSAL PIGMENT PASTES

- ▶ Used as grinding resin because of its universal solubility & broad compatibility
- ▶ Low solution viscosity, High pigment binding capacity & Improved Rheology
- ▶ Transparency

	<i>Organic Pigments</i>	<i>In-Organic Pigments</i>	<i>Carbon Black Pigments HCC/LCC</i>
<i>POLYTONE™ UA 810</i>	<i>25-40</i>	<i>15-25</i>	<i>25-45</i>
<i>Solvent</i>	<i>15-30</i>	<i>5-15</i>	<i>25-40</i>
<i>Dispersing agent</i>	<i>10-15</i>	<i>3-10</i>	<i>8-15</i>
<i>Anti Settling agent</i>	<i>-</i>	<i>0.3-1.0</i>	<i>-</i>
<i>Pigment</i>	<i>15-40</i>	<i>45-65</i>	<i>10-25</i>
<i>Viscosity~ 500 – 3000 mPas</i>			

## **APPLICATIONS**

### **ALKYD RESINS, AIR DRYING AND OVEN DRYING**

- ▶ Replacement of up to 20% solids on solids
- ▶ Improves gloss, body, flow
- ▶ Improves yellowing resistance via heat stability
- ▶ Improves fastness to light
- ▶ Can used as a modifying component in Alkyd Resin Production

### **POWDER COATINGS**

- ▶ Replacement of up to 15% Epoxy/Polyester or PUR
- ▶ Improves flow due to low melt viscosity

### **HOT MELTS FOR ROAD MARKING & SPRAY PLASTICS**

- ▶ Used as basic resin in combination with suitable plasticizer due to low melt viscosity, good light fastness and heat stability
- ▶ Improves adhesion to substrate

### **NITRO CELLULOSE**

- ▶ Improves light fastness, gloss and body

### **AUTOMOTIVE OEM APPLICATIONS**

### **INTERIOR/EXTERIOR METAL COATING APPLICATION**

- ▶ Heat Resistance
- ▶ Improves Adhesion to Substrate

## **PACKAGING, STORAGE & SHELF LIFE**

Available in 20Kg or 25Kg HDPE Line KRAFT Paper Bags with Anti Static Liner.  
Choice of ISPM 15 Standard Heat Treated/Fumigated Pallets or Plastic Pallets.

Individual pallets must NOT be double stacked – pastilles/lumps are likely to agglutinate.  
Properties are not affected by agglutination

POLYTONE™ UA 810 can be stored up to 24 months at temperatures below 40 °C. We suggest use within 12 months.

## **SAFETY**

Please follow advice and information provided in MSDS. Protective clothing & workplace hygiene measure must be observed at all times.

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