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Laropal® A 81

General

Laropal® A 81 is an aldehyde resin for pigment dispersions, can be used in wood coating formulations to improve performance.

Key Features & Benefits

- Promotes the natural grain and color of wood
- Good elasticity, adhesion, and hardness
- Excellent toughness

Chemical nature

Condensed products from urea and aliphatic aldehydes

Properties

Appearance

Solid Particles

Typical characteristics
(should not be interpreted as specifications)

Acid value	≤ 3 mg KOH/g
Iodine color number	≤ 3
Density 20 °C	~ 1.11 g/cm³, 9.33 lbs/gal
Softening range	80 – 95°C
Tg	~ 57°C, 135°F
Hydroxyl value	~ 40 mg KOH/g
Saponification value	~ 65 mg KOH/g

Solubility

Soluble in alcohols, esters, ketones, and aromatic hydrocarbons; aliphatic hydrocarbons – solutions tend to separate at temperatures below 15°C, adding 2-5% of an aromatic solvent produces stable solutions.

Compatibility

Compatible with nitrocellulose, CAB resins, chlorinated rubber, VC copolymers, acrylic resins, urea-formaldehyde resins, melamine-formaldehyde resins, alkyd resins, epoxy resins, and hydrocarbon resins; limited compatibility with ethyl cellulose.

These typical values should not be interpreted as specifications. Solubility and compatibility should be tested for each individual combination.

Application

Because of its excellent solubility and compatibility, Laropal® A 81 can be used in many types of coating formulation system. Depending on the application, it improves and promotes gloss, hardness, body, adhesion, and resistance to yellowing etc.

Because of its good pigment wetting and very low solution viscosity, Laropal® A 81 can be used for the manufacture of pigment pastes with high pigment content.

Laropal® A 81 is very heat stable and can be used in baking finishes.

Laropal® A 81 is recommended for applications such as:
• Interior/exterior general industrial metal coating applications
• Automotive OEM applications

Fields of application

Alkyd resins, air- and oven-drying
• Partial replacement of up to 20% solids on solids
• Improvement of resistance to yellowing through excellent heat stability and lightfastness
• Improvement of hardness, gloss, body, and flow
• Cost reduction
• Use as modifying component in alkyd resin production

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 heat stability
• Improves adhesion to substrates

Performance Properties

	Laropal® A 81	Laropal® A 101
Brightness	1	2
Fastness to light	1	1
Heat resistance	1	1
Compatibility	1	1
Soluble in alcohols	1	1
Soluble in aliphatic hydrocarbons	3	5
Suitable for coatings resistant to water	3	3
Suitable for coatings resistant to mineral oils	2	1
Suitable for coatings resistant to saponification	3	3
Solvent release	3	2
Pigment binding capacity	1	2

1 = very good; 5 = insufficient

For further detailed application information please contact our Technical Support Department.

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