

Technical Information of INT Aldehyde Resin

Aldehyde resin is a kind of aldehyde condensation resin, which is colorless or yellowish. It is soluble in almost paint solvents but not in water and compatible with practically all coating raw materials, it is excellently yellowing-resistant. It is usually as grinding resin in universal pigment and applied in coating formulation. It can effectively improve adhesion, hardness, gloss, solid content of paint and fullness of coatings. It is a kind of excellent multifunctional additive to coating/printing. There are INT A-81、INT A-81(non-benzene)、INT A-101 and INT A-101(non-benzene) according to different property and application.

Specification

Item	Series	INT A-81	INT A-81 non-benzene	INT A-101	INT A-101 non-benzene	Test Method
Appearance		Colorless, transparent solid, no obvious mechanical impurity after dissolution				Naked eye
Softening point (°C)		95-100	95-100	100-110	100-110	ISO 4625-1:2004
Color Gardner ^[1]		<1	<1	<1	<1	ISO 4630-1:2004
Acid value (mgKOH/g)		<3	<3	<3	<3	ISO 2114:2000
Hydroxyl value (mgKOH/g)		40-70	40-70	40-70	40-70	DIN 53240-2:1998
Density(g/cm ³)		1.15±0.05	1.15±0.05	1.15±0.05	1.15±0.05	ISO 1183-1:2004(E)B
Kinematic viscosity ^[2] (mm ² /s)		10-25	10-25	15-30	15-30	GB/T 1660-2008
Ford cup 4 viscosity ^[3] (s)		10-25	10-25	15-30	15-30	ASTM D1200
Content of benzene, toluene, xylene			Not detected		Not detected	SGS

[1] The resin is 50% (mass fraction) solution in butyl acetate and ethanol, they account for 85% and 15% respectively.

[2],[3] 50% resin solution of ethanol, solution temperature remains 25°C when viscosity is detected.

Solubility

INT Aldehyde resin is soluble in almost common paint solvents such as aromatic hydrocarbons, alcohols, ketones, esters and so on but insoluble in water. Its solubility in nonpolar solvents such as mineral oil, aliphatic hydrocarbon, alicyclic hydrocarbon is limited, which should be paid attention.

Compatibility

INT Aldehyde resin is compatible with many coating raw materials including:

Alkyd resin	Phenolic resin	Vinyl chloride copolymer	Phthalate plasticizer
Cellulose nitrate	Urea-formaldehyde resin	Acrylic resin	Melamine-formaldehyde resin
Cellulose acetate-butylate	Epoxy resin	Polyurethane	Polyamide resin
Petroleum resin	Rosin	Chlorinated rubber	

Application

- INT Aldehyde resin can be used in many formulations of coating/printing.
- It can improve gloss, hardness, adhesion, and yellowing resistance of coating/printing.
- It shows excellent wetting to filling and pigment, and is a kind of excellent grinding resin in universal pigment and can improve solid content when applied in coating.
- INT A-81 and INT A-101 is usually used in formulation of common coating/printing.
- INT A-81 (non-benzene) and INT A-101 (non-benzene) is usually used in formulation of environmental-friendly coating/printing because there are no organics such as benzene, toluene, xylene and ketones.

Storage

INT Aldehyde resin must be stored in dry and cool place, the period of validity is one year, it also can be used after one year if examined again and conformance to requirements.