

## EF KA-81 Aldehyde Resin

### Product Description:

Pale, yellowing-resistant aldehyde resin is soluble in almost all paint solvents and compatible with practically all coating raw materials. Its main uses are combination with other resin binders and the production of all-purpose pigment pastes.

Nature: Condensation product of urea and aliphatic aldehydes

### Features:

1. EF KA-81 can work with N/C, alkyd or PU chlorinated copolymer resin and plasticizer to make transparent or coloured coating, applicable for wooden article, metal and paper.
2. The solution of KA81 has low viscosity and good fluidity. It can increase the solid content in coating and improve the film thickness, lustre, hardness and yellowing resistance.
3. EF KA-81 is insoluble in aliphatic hydrocarbon solvent, so that it can be used in coating resistant to gasoline.
4. EF KA-81 can be used in baking paint for it will not decompose to send off peculiar smell or influence the lustre. 5% dosage can increase the hardness from 1H to 3H and remain the flexibility/resistance.
5. Comparing with Ketone resins & Maleic resins, EF KA-81 is superior as follows:
  - Better yellowing resistance;
  - Better fluidity, so solid content can be increased;
  - Improve the solubility of N/C in mixed solvent;
  - No adverse influence on flexibility/resistance (If add more than 10% of Ketone resin, flex-resistance will decrease dramatically.);
  - Easier to dissolve, low solution viscosity, easier to handle.

### Typical properties:

	EF KA-81
Appearance	Colourless to yellowish granules
Specific gravity	1.1
Hydroxyl value	Approx. 40 mgKOH/g
Acid value	3 max.
Softening point	90-100 °C
Saponification value	Approx. 50 mgKOH/g
Glass transition temperature Tg	Approx. 57 °C

**Solubility:**

EF KA-81 is soluble in all common paint solvents but insoluble in water.

Their 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 (e.g. Solvesso R100).

Compatibility: EF KA-81 is compatible with many coatings raw materials including:

- alkyd resins
- cellulose nitrate
- cellulose acetobutyrate
- vinyl chloride copolymers
- chlorinated rubber
- hydroxyl polyacrylates
- melamine formaldehyde resins
- aromatic and aliphatic epoxy resins
- hydrocarbon resins
- phthalate plasticizers

**Applications:**

Excellent solubility and compatibility enables EF KA-81 to be used in many types of coating formulation.

They can be used to improve gloss, hardness, body, adhesion and yellowing resistance, depending on the coating's intended application.

A very pale colour and good pigment wetting are two properties that make EF KA-81 particularly suitable for producing all-purpose pigment preparations. The low viscosity of its solutions enables high-pigment-content pastes to be produced.

Since they have good heat resistance, EF KA-81 is also used for baking finishes, particularly because it does not cause any odours or discoloration of the resin.

Manufacturers must carry out their own trials for developing products based on EF KA-81 because the manufacture and use of such products are affected by a large number of factors (e.g. compatibility of the components, storage stability), which we cannot cover exhaustively in our own trials.