

67204 Aldehyde Resin 81

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

Composition: Condensation product of urea and aliphatic aldehydes.

Physical and Chemical Properties

Form:	pastilles
Color:	pale yellow
Odor:	slight odor

Product Specification

Softening range (DIN 53180):	80-95°C
Iodine color (DIN 6162):	≤ 3
Acid value (DIN EN 2114):	≤ 3 mg KOH/g
Solid content (DIN EN ISO 3251, 1g, 125°C, 1 hour):	---
pH-Value, 10%-solution (ISO 976, DIN 53785):	---
Solubility in water:	unsoluble
Viscosity at 23°C (DIN EN ISO 3219):	---

Further Properties

Density at 20°C (ISO 2811, DIN 53 217):	1.11g/cm ³
Hydroxyl value (ISO 4629, DIN ISO 4629):	40 mg KOH/g
Saponification value (ISO 3681, DIN 53401):	65 mg KOH/g
Flash temperature (DIN EN 22719):	---
Glass transition temperature T _a (DSC):	57°C

Solubility

Aldehyde Resin 81 is soluble 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 (e.g. Solvesso[®] 100).

Compatibility

Aldehyde Resin 81 is compatible with many coatings raw materials including:

- Alkyd resins
- Vinyl chloride copolymers
- Chlorinated rubber
- Hydroxypolyacrylates
- Melamine-formaldehyde resins
- Cellulose nitrate
- Cellulose acetobutyrate
- Aromatic and aliphatic epoxy resins
- Hydrocarbon resins
- Phthalate plasticizers

Properties

1 very good - 5 insufficient

Lightness:	1
Lightfastness:	1
Temperature stability:	1
Compatibility:	1
Solubility in alcohol:	1
Solubility in aliphatics:	3
Suitability for waterproof varnishes:	3
Suitability for mineral oil-resistant varnishes:	2
Suitability for saponification-resistant varnishes:	3
Pigment binding ability:	1

Application

Aldehyde Resin 81's excellent solubility and compatibility enable it to be used in many types of coating formulation. It 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 Aldehyde Resin 81 particularly suitable for producing all-purpose pigment preparations. The low viscosity of its solutions enable high-pigment-content pastes to be produced.

Since it has good heat resistance, Aldehyde Resin 81 is also used for baking finishes, particularly since it does not cause any odors or discoloration of the resin.

Manufacturers must carry out their own trials for developing products based on Aldehyde Resin 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.

Safety

General:

Attention must be paid to the normal precautions for handling chemicals and to the measures prescribed in the local health regulations. The workplace must be well ventilated, skin care measures should be adopted and eye protection should be worn.

Industrial Hygiene:

According to the experience we have gained over many years and other information at our disposal, Aldehyde Resin 81 does not pose any risk to health when it is used for the purposes for which it is intended and the principles of sound industrial practice are observed.

Labelling:

According to the data at our disposal, Aldehyde Resin 81 is not a hazardous product in the sense of the German regulations or the "EC Guidelines for Classification, Packaging and Labelling of Dangerous Substances". It contains no constituents that must be taken into account for labelling.

Food Legislation:

The composition of Aldehyde Resin 81 conforms to §30 & 31 of the German consumer-protection act *Lebensmittel- und Bedarfsgegenständegesetz*, provided that it is processed in accordance with the principles of sound manufacturing practice.

Storage:

Aldehyde Resin 81 has a shelf-life of 2 years at temperatures below 40°C.

Note:

This data sheet does not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.