

TECHNICAL DATA SHEET

Polyketone Resin

Cyclohexanone-formaldehyde resin is the condensation polymer of cyclohexanone and formaldehyde, which includes carbonyl and hydroxyl group, it can also be called ketone aldehyde resin. It shows excellent compatibility with almost coating/printing raw materials. It is soluble in almost organic solvents and exhibits good wetting and dispersion to the filling and pigment. It can also improve yellowing-resistant, adhesion, gloss and hardness of coating. It is a kind of excellent multifunctional additive of coating. It is usually as grinding resin in universal pigment and coating/painting. There are SH 105, SH 120, SH 120W and SH 130 according to different property and application.

Specification

Item \ Series	SH 105	SH 120	SH 120W	SH 130	Test method
Appearance	Yellowish, transparent solid, no obvious mechanical impurity after dissolution				Naked eye
Color Gardner ^[1]	<1				ISO 4630-1:2004
Softening point (°C)	95-105	105-125	105-125	125-140	ISO 4625-1:2004
dissolve with ethanol	excellent	excellent	excellent	common	Resin dissolve with ethanol by 50%
Acid value (mgKOH/g)	<3	<3	<3	<3	ISO 2114:2000
Hydroxyl value (mgKOH/g)	70-110	70-110	≥160	≥80	DIN 53240-2:1998
Density(g/cm ³)	1.15±0.05				ISO 1183-1:2004(E)B
Kinetic viscosity ^[2] (mm ² /s)	10-30	30-50	30-50	40-60	GB/T 1660-2008
Ford cup viscosity ^[3] (s)	15-25	20-30	20-30	25-35	ASTM D1200

[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

Polyketone resin is soluble in almost common paint solvents such as



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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 when used.

Application

Polyketone resin is characteristic of excellent compatibility, solubility and transparency, which enable it to improve gloss, adhesion, hardness, fullness and dryness when applied in coatings/printing ink. It shows excellent wetting to the coating and filling, it is a kind of excellent grinding resin in universal pigment and can improve the solid content when applied in coatings.

- SH 105 resin is used for formulation of common coating/printing.
- SH 120 resin is used for formula of coating/printing which requires a high degree of softening point.
- SH 120W resin is almost odorless, so it is used for formula of coating/printing which requires a high degree of odor.
- SH 130 resin possesses superhigh softening point, so it is used for formula of coating/printing which requires a high degree of softening point.

Storage

Cyclohexanone-formaldehyde 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.