

Synthetic Resin EP-UC (preliminary)

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General Description

Synthetic Resin EP-UC is a special modified polyether ketone resin, used as a wetting and dispersing additive for waterborne and solventborne coatings due to its universal solubility and compatibility and excellent pigment wetting.

Typical data

Property	Value	Unit	Test method
Viscosity at 23 °C	approx. 25000	mPa s	DIN EN ISO 3219
Colour (Gardner)	< 7	-	DIN EN ISO 4630
Acid number	≤ 1	mg KOH/g	DIN EN ISO 2114
Density at 20 °C	1.08	g/cm ³	DIN 51757 ISO 758

Chemical Classification

Special modified polyether ketone resin with pigmentaffinic groups

Supply Form

Yellow, clear and viscose liquid

Storage Stability and Packaging

Plastic drums, 25 kg net wt.

Synthetic Resin EP-UC has a shelf life of at least one year providing it is stored at temperatures below 25 °C with exclusion of light and dampness.

Solubility

Synthetic Resin EP-UC is soluble in all solvents commonly used in the paint industry. The solubility is restricted in aliphatic hydrocarbons. Synthetic Resin EP-UC is soluble in water.

Compatibility

In order to test the compatibility of Synthetic Resin EP-UC with binders corresponding solutions or dispersions, respectively, were mixed in such a way that 20 and 40 % of synthetic resin, based on the respective binder, were added.

After application to glass and drying, the dry films were assessed for appearance. Individual data are shown in the following table.

Solvent-borne binders

Compatibility with Synthetic Resin EP-UC

Acrylic resins	+
Aldehyde resins	+
Alkyd resins short oil	+
medium oil	+
long oil	+
Epoxy resins	+
Epoxyacrylate resins	+
Ketone resins	+
Melamine resins	+
Nitrocellulose resins	±
Polyamide resins	+
Polybutadiene resins	+
Polyester resins	+
Polyvinylacetale resins	+
Urethane resins	+
Urethane acrylate resins	+
Urethane alkyd resins	+

Water-borne binders

Compatibility with Synthetic Resin EP-UC

Acrylic dispersions	+
Alkyd resins, water-dilutable	+
Alkyd dispersions	+
Poly(meth)acrylate dispersions	+
Polyurethane dispersions	+
Polyvinylacetate dispersions	+
Styrene-acrylic dispersions	+

+ = compatible

± = limited combability, in some cases slight film haze

- = incompatible

Application

Synthetic Resin EP-UC is particularly suitable for the production of universal pigment concentrates due to its universal solubility in organic solvents and water, its universal compatibility and its good pigment wetting properties, high gloss and drying. The color strength development with organic and inorganic pigments and carbon blacks is excellent. Synthetic Resin EP-UC is suitable for both, water-based and glycol containing pigment concentrates. It is also suitable for direct grind in water- and solvent-based systems. Synthetic Resin EP-UC is free of solvents and nonylphenoethoxyate.

Synthetic Resin EP-UC is added to the grind before dispersion. The foam build up during pigment dispersion in water is significantly reduced. In the case of little foam build up it is decomposed rapidly. Normally, it is not needed to use a defoamer.

Guide formulations for pigment concentrates based on Synthetic Resin EP-UC are available on request.

Safety and Handling

Please refer to our Material Safety Data Sheet.

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