

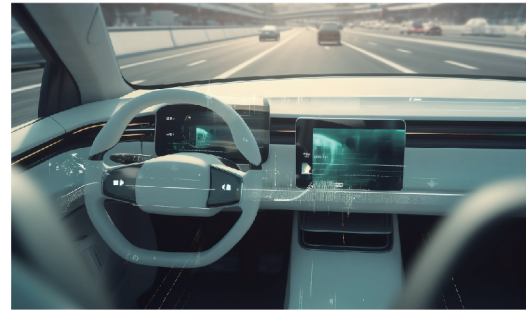
Usage Suggestions

VP-20 resin is soluble in toluene and MEK, and generally suitable for conventional CCL manufacturing technique, except that a higher pressing temperature might be needed. It can be formulated with other components like unsaturated monomers, oligomers and polymers and cure via free radical reactions, or mix-used with epoxy resins.

Applications



Communication Equipment



Automotive Electronics

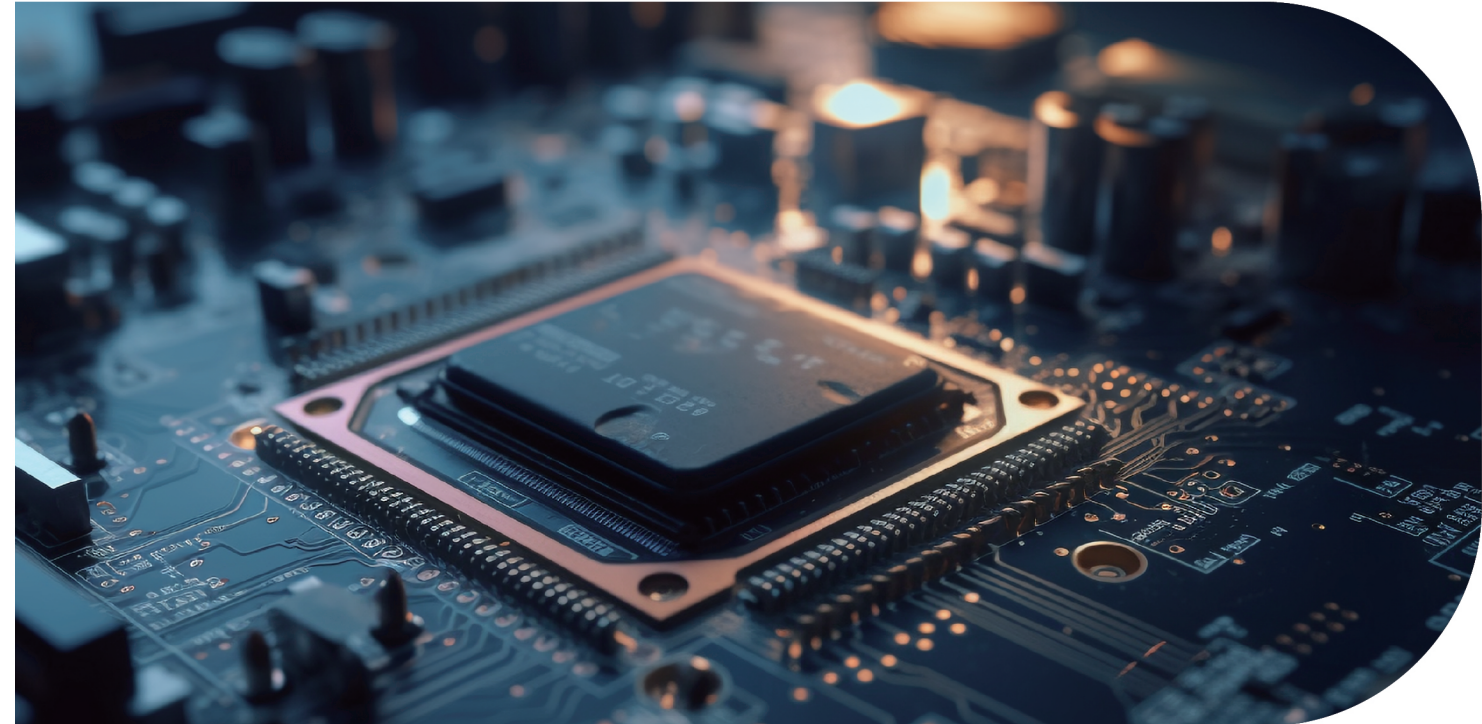


Computer and Related Equipment



Consumer Electronics

MODIFIED PPO



Overview

VP-20 resin is a modified low molecular weight resin with vinyl end groups produced. It has very low dielectric constant and dissipation factor, excellent heat resistance, low moisture uptake, good dimensional stability, and outstanding solubility in toluene & methyl ethyl ketone (MEK). VP-20 is well suited for the preparation of high-frequency, high-speed copper clad laminates and prepregs.

Application Examples

Polyful MPPPO products were validated in small quantities at downstream customer Mid-Loss' copper-clad pilot line and production line.

Dimensional Stability

The test results meet the requirements of IPC-4101E-WAM1 standard.

Glass Transition Temperature (DSC method)

Tg1 is 193.58°C, Tg2 is 199.55°C

Thermal Decomposition Temperature

Td (2%): 391.67 °C

Td (5%): 419.67 °C

Dielectric Constant And Dielectric Loss Angle Tangent

(1MHz) Dk: 3.8 Df: 0.005

(1GHz) Dk: 3.5 Df: 0.008

Qualification



Parameters

Properties	Test Methods	Unit	Typical Value
Appearance	/	/	White powder
Specific Gravity	ASTM D792	g/cm3	1.02
Mn	Internal method	g/mol	2400
PDI	Internal method	/	1.7
Vinyl Functionality	Internal method	/	1.9
Phenolic End-group Content	Internal method	ppm	200
Solubility (Toluene, 25°C)	Internal method	wt%	50
Solubility (MEK, 25°C)	Internal method	wt%	50
Viscosity, 50 wt% in MEK, 25°C	Internal method	cP	142
Tg	Internal method	°C	155

Note: These figures are only intended as a guide and should not be used in preparing specifications.