

Soybean Oil Based Unsaturated Polyester Resin (SOYMER)

Description

Soymer is unsaturated polyester molding resin derived in part from soybean oil. It is an unpromoted, medium reactive and low viscosity molding resin. Soymer has a green content of 35wt%.

Application

The product is intended as a general purpose molding resin for SMC, BMC, and Pultrusion applications. It can be used by itself or in combination with other unsaturated polyester resin.

Features and Benefits

- Derived from Soybean oil
- Low Viscosity
- Balanced of mechanical properties and toughness
- Compatible with other unsaturated polyester resin
- Use with both styrene and styrene free systems



Typical Physical Properties

Measurement	SOYMER
Viscosity-(Brookfield LVT #3 @30 RPM)	880cps
Non Volatile %	69%
Acid Number-On solution (mg/g)	14
Specific Gravity (lbs./gallon)	8.87
SPI Gel Time (minutes)	3.5
SPI Cure (minutes)	3.0
SPI Peak Exotherm (Degrees C)	175

Typical Mechanical and Electrical Properties of Molded Part

Measurement	SOYMER
Flex Modulus	1.5
Tensile	17,486
Tensile Modulus	1.7
Impact (notched)	21.1
Arc (seconds)	180
Dielectric (volts/mil.)	321



Typical SMC Processing Parameters

Measurement	SOYMER
Dielectric Cure Analysis-Minimum Flow Time (seconds)	11.93
Dielectric Cure Analysis-Gel Time (seconds)	21.36
Dielectric Cure Analysis-Cure Time (seconds)	53.06
Specific Gravity	1.78
Shrink (Hot Tool to Cood Part) mil./inch	2.76
Shrink (Cold Tool to Cold Part)	1.26
Paste Viscosity before Thickener	8000 cps at 90 F
Viscosity in 1 Day (millions CPS) Stored 95F	3
Viscosity in 4 Days (millions CPS) Stored 95F	11
Molded Panel at 20-25% Glass	Good Part

