SABIC Innovative Plastics™

PPO* SA120M

Asia Pacific: COMMERCIAL

PPO[1,2] SA120M resin is a pulverized version of a low molecular weight polymer based on Polyphenylene ether (PPE). PPO SA120M is intended for use as additive or building block in a variety of thermoplastics, thermoplastic elastomers like Styrenic Block Copolymers and thermoset materials like Epoxies, Phenolics, Polyurethanes and unsaturated polyesters. Properties that may be improved by adding PPO SA120M resin to these thermosets can include: Thermal (glass transition temperature), Adhesion (at elevated temperatures), Mechanical (toughness, dimensional stability), Chemical resistance (acids, bases), Moisture absorption, and Electrical Properties (dielectric constant, dissipation factor).

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
PHYSICAL			
Physical Form	Powder	-	-
Specific Gravity	1.02	g/cm^3	ISO 1183
Intrinsic Viscosity	0.12	dl/g	SABIC Method
Phenolic end-group content	425	μ mol/g	SABIC/FTIR
Tg	165	° C	SABIC/DMTA
Solubility	Toluene/ Chloroform/ Trichloromethane/ Styrene		
Gardner Color in 20% toluene			
Initial	12		
Aged 177 ° C, 24 hrs, nitrogen	14		
Mw	6300		SABIC/GPC
Mn	2350		SABIC/GPC
D	2.7		SABIC/GPC
Onset of decomposition	440	° C	TGA in Nitrogen
1%wt loss (TGA)	290	° C	TGA in Nitrogen
Dissipation Factor (@ 1 MHz)	0.0007		
Dielectric Constant (@ 1 MHz)	2.54		
Viscosity, pure	7340	Poise	Brookfield @ 240 ° C
Viscosity, 50/50 with styrene tackifier	6930	Poise	Brookfield @ 177 ° C
Particle Size	90% < 100 μ		Malvern
	100% < 250 μ		