EMPILON® 590

Styrene Ethylene Butylene Styrene Block Copolymer

EMPILON

Message:

EMPILON® 500 series compound contains an average Tensile Strength property. EMPILON® 500 series can be applied in many fields of use, such as: hand grips, household goods, sporting goods, stationary, toys etc. Styrenic Block Copolymer is the main content of this 500 series compound, its hardness range is from Shore A 29 to 95. They can be processed by ordinary plastic Injection machinery, extrusion or calendaring etc.
EMPILON® 500 series compound are non-toxic and free of Pb Cd, Hg, Cr6+, Sb, As, Ba, Se, halogen and DOP plasticizer, they also comply with the directive of Restriction of the use of certain Hazardous Substance in electrical and electronic equipment (RoHS 2002/95/EC) and SONY SS-00259 4th that prohibit products that contain Pb.Cd.Hg.Cr6+.PBB.PBDE etc. They are 100% recyclable and comply with the directive of Waste Electrical and Electronic Equipment (WEEE 2002/95/EC).
EMPILON® 500 series compound retain good mechanical properties after solvent resistance testing and do not hydrolyze in water. They need 80~90°C dehumidified hot air at least 2 hours before any molding process and need to be continually dried during operation. For coloring, please select color master batch based on PE or EVA material except for PVC. Higher screw speed and backpressure are needed for better colorant dispersion.

General Information	
Features	Block Copolymer
	Low (to no) lead content
	Calcium content, low (to none)
	Recyclable materials
	Hydrolysis resistance
	Non-toxic
	Halogen-free
	No antimony
Uses	Household goods
	Sporting goods
	Toys
	Stationery
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Extrusion
	Calendering
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	23	g/10 min	ASTM D1238
Molding Shrinkage [1]			
Flow	0.50	%	
Transverse flow	1.2	%	

Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore D, 10 sec)	36		ASTM D2240
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (300% Strain)	3.92	MPa	ASTM D412
Tensile Strength	6.47	MPa	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Compression Set (23°C, 70 hr)	68	%	ASTM D395
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air (125°C, 168 hr)	-4.0	%	ASTM D573
Change in Ultimate Elongation in Air (125°C, 168 hr)	-22	%	ASTM D573
Change in Durometer Hardness in Air (support d, 125°C, 168 hr)	7.0		ASTM D573
Thermal	**Nominal Value**	**Unit**	
Brittleness Temperature	-55.0	°C	
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80.0 - 90.0	°C	
Drying Time	2.0	hr	
Rear Temperature	165 - 175	°C	
Middle Temperature	175 - 185	°C	
Front Temperature	185 - 195	°C	
Nozzle Temperature	180 - 190	°C	
Processing (Melt) Temp	160 - 200	°C	
Mold Temperature	40.0 - 50.0	°C	
Injection Pressure	2.94 - 3.92	MPa	
Injection Rate	Moderate		
Back Pressure	0.490	MPa	
Screw Speed	Medium to high		
Injection instructions			
Hold Time: 5 sec.Cycle Time: 15~20 sec.			
NOTE			
1.	Reference Only		

Recommended distributors for this material

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