

EMPILON® 380

Styrene Ethylene Butylene Styrene Block Copolymer

EMPILON

Message:

EMPILON® 300 series compound is the entry level of EMPILON® material, which has a limited Tensile Strength property. EMPILON® 300 series can be adapted to many fields of use, such as: hand grips, household goods, sporting goods, stationary, toys etc. Styrenic Block Copolymer is the main content of this 300 series compound, its hardness range is from Shore A 48 to 95. They can be processed by way of ordinary plastic machinery for Injection, extrusion or calendaring etc.

EMPILON® 300 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 Restriction of the use of certain Hazardous Substance directive 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% recycable and comply with the Waste Electrical and Electronic Equipment directive (WEEE 2002/95/EC).

EMPILON® 300 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	1.23	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage ¹			
Flow	0.30	%	
Transverse flow	0.60	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 10 sec)	85		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (300% Strain)	3.53	MPa	ASTM D412
Tensile Strength	4.12	MPa	ASTM D412
Tensile Elongation (Break)	420	%	ASTM D412
Compression Set (23°C, 70 hr)	41	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (125°C, 168 hr)	28	%	ASTM D573
Change in Ultimate Elongation in Air (125°C, 168 hr)	-14	%	ASTM D573
Change in Durometer Hardness in Air (Shore A, 125°C, 168 hr)	3.0		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 - 190	°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: 20~30 sec.			
NOTE			
1.	Reference Only		

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