

EMPILON® 681

Styrene Ethylene Butylene Styrene Block Copolymer

EMPILON

Message:

EMPILON® 600 series compound having high transparency, good resilience, excellent mechanical properties and lower specific weight are specially designed for medical, food and anti-vibration related applications. Hydrogenated Styrenic Block Copolymer is the main content of this 600 series compound. They have low specific gravity and the hardness range is provided from Shore OO 33~Shore A 81. They can be processed by way of ordinary plastic machine for Injection, extrusion or calendaring etc.

EMPILON® 600-series compound are non-toxic and free of Pb, Cd, Hg, Cr6+, Sb, As, Ba, Se, halogen and DOP plasticizer, they 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 and PBDE etc. They are 100% recyclable and comply with the Waste Electrical and Electronic Equipment directive (WEEE 2002/95/EC).

EMPILON® 600-series compound retain good mechanical properties both before and after heat resistance, weathering and solvent tests and won't hydrolyze in water. It is not necessary to dehumidify the material before use. For coloring, please select color master batch based on material PE or EVA directive with the exception of PVC. Higher screw speed and backpressure are required for better colorant dispersion.

General Information			
Features	Block Copolymer		
	Low (to no) lead content		
	Low density		
	Calcium content, low (to none)		
	Recyclable materials		
	Hydrolysis resistance		
	Non-toxic		
	Halogen-free		
	No antimony		
	Elastic		
Uses	Non-specific food applications		
	Medical/nursing supplies		
RoHS Compliance	RoHS compliance		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Calendering		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.880	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	13	g/10 min	ASTM D1238
Molding Shrinkage ¹			
Flow	0.20	%	

Transverse flow	0.70	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 10 sec)	80		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (300% Strain)	4.41	MPa	ASTM D412
Tensile Strength	10.6	MPa	ASTM D412
Tensile Elongation (Break)	540	%	ASTM D412
Compression Set (23°C, 70 hr)	35	%	ASTM D395
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (125°C, 168 hr)	-23	%	ASTM D573
Change in Ultimate Elongation in Air (125°C, 168 hr)	-9.0	%	ASTM D573
Change in Durometer Hardness in Air (Shore A, 125°C, 168 hr)	-9.0		ASTM D573
Thermal	Nominal Value	Unit	
Brittleness Temperature	-50.0	°C	
Optical	Nominal Value	Unit	
Transmittance	78.0	%	
Injection	Nominal Value	Unit	
Rear Temperature	165 - 175	°C	
Middle Temperature	175 - 190	°C	
Front Temperature	185 - 195	°C	
Nozzle Temperature	185 - 200	°C	
Processing (Melt) Temp	180 - 200	°C	
Mold Temperature	40.0 - 50.0	°C	
Injection Pressure	3.43 - 4.90	MPa	
Injection Rate	Fast		
Back Pressure	0.490 - 0.785	MPa	
Screw Speed	Medium		
Injection instructions			
Hold Time: 5 sec.Cycle Time: 15~30 sec.			
NOTE			
1.	Reference Only		

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