

# EMPILON® 770

## Styrene Ethylene Butylene Styrene Block Copolymer

### EMPILON

#### Message:

EMPILON® 700 series compound has a higher Tensile Strength property, good resilience, excellent mechanical properties than that of the 500 series. EMPILON® 700 series can be applied in many fields of use, such as: hand grips, automotive parts, household goods, sporting goods, stationary, toys etc. Hydrogenated Styrenic Block Copolymer is the main content of this 700 series compound, its hardness ranges from Shore OO 33 to A 95. They can be processed by ordinary plastic machinery for Injection, extrusion or calendaring etc.

EMPILON® 700 series compound are non-toxic and free of Pb, Cd, Hg, Cr6+, Sb, As, Ba, Se, halogen and DOP plasticizer, they also compliant 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% recyclable and comply with the Waste Electrical and Electronic Equipment directive (WEEE 2002/95/EC).

EMPILON® 700 series compound retain good mechanical properties after solvent resistance testing and won't hydrolyze in water. It is not necessary to dehumidify before any molding process. For coloring, please select color master batch based on PE or EVA material with the exception of 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		
	Elastic		
Uses	Household goods		
	Application in Automobile Field		
	Sporting goods		
	Toys		
	Stationery		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
	Calendering		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.900	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	16	g/10 min	ASTM D1238
Molding Shrinkage <sup>1</sup>			

Flow	0.50	%	
Transverse flow	1.0	%	
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Durometer Hardness (Shore A, 10 sec)	73		ASTM D2240
<b>Elastomers</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Stress (300% Strain)	3.63	MPa	ASTM D412
Tensile Strength	7.06	MPa	ASTM D412
Tensile Elongation (Break)	650	%	ASTM D412
Compression Set (23°C, 70 hr)	37	%	ASTM D395
<b>Aging</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Change in Tensile Strength in Air (125°C, 168 hr)	-19	%	ASTM D573
Change in Ultimate Elongation in Air (125°C, 168 hr)	-20	%	ASTM D573
Change in Durometer Hardness in Air (Shore A, 125°C, 168 hr)	3.0		ASTM D573
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	
Brittleness Temperature	-50.0	°C	
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Rear Temperature	175 - 190	°C	
Middle Temperature	185 - 195	°C	
Front Temperature	190 - 205	°C	
Nozzle Temperature	190 - 210	°C	
Processing (Melt) Temp	180 - 220	°C	
Mold Temperature	40.0 - 50.0	°C	
Injection Pressure	3.43 - 4.90	MPa	
Injection Rate	Fast		
Back Pressure	0.490 - 0.981	MPa	
Screw Speed	Medium to high		
<b>Injection instructions</b>			
Hold Time: 5 sec.Cycle Time: 15~25 sec.			
<b>NOTE</b>			
1.	Reference Only		

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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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