EMPILON® HA40

Styrene Ethylene Butylene Styrene Block Copolymer

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Message:

EMPILON® HA series compound are specially designed for over-molding with engineering plastic such as ABS, PC, Nylon, PETG, PBT etc. which are commonly use in the 3C industry (Computer, Communication and Consumer electronics) as well as hand held device products for soft touch, anti-slip & vibration functional purposes. Hydrogenated Styrenic Block Copolymer is the main content of this HA series compound, its hardness range is from Shore A 52 to 77. They can be processed by Double injection and co-extrusion machines or ordinary plastic injection machines with an insert molding process.
EMPILON® HA-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 and PBDE etc. They are 100% recyclable and comply with the Waste Electrical and Electronic Equipment directive (WEEE 2002/95/EC).
EMPILON® HA-series compound retain good mechanical properties after heating, weathering and solvent resistance testing and won't hydrolyze in water. They need 80°C ~ 90°C dehumidified hot air at least 2 hours before any molding process and need to be continually dried during operation. The HA series are Opaque or Transparent type in nature. For coloring, please select color master batch based on PE or EVA material with the exception of PVC. Higher screw speed and backpressure are necessary 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	overmolding Soft touch application
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Co-extrusion molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	6.0	g/10 min	ASTM D1238
Molding Shrinkage [1]			
Flow	1.9	%	
Transverse flow	1.5	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	36		ASTM D2240
Elastomers	**Nominal Value**	**Unit**	**Test Method**

Tensile Stress (300% Strain)	2.06	MPa	ASTM D412
Tensile Strength	4.51	MPa	ASTM D412
Tensile Elongation (Break)	780	%	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)	94	%	ASTM D573
Change in Ultimate Elongation in Air (125°C, 168 hr)	5.0	%	ASTM D573
Change in Durometer Hardness in Air (125°C, 168 hr)	0.0		ASTM D573
Thermal	Nominal Value	Unit	
Brittleness Temperature	-40.0	°C	
Additional Information	Nominal Value	Unit	
Adhesion to ABS	2.4	kN/m	
Adhesion to PC	2.0	kN/m	
Screw Speed	Medium		
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 90.0	°C	
Drying Time	2.0	hr	
Rear Temperature	180 - 190	°C	
Middle Temperature	185 - 200	°C	
Front Temperature	195 - 205	°C	
Nozzle Temperature	200 - 220	°C	
Processing (Melt) Temp	190 - 210	°C	
Mold Temperature	40.0 - 50.0	°C	
Injection Pressure	3.43 - 4.90	MPa	
Injection Rate	Moderate		
Back Pressure	0.490 - 0.981	MPa	
Injection instructions			
Hold Time: 5 sec.Cycle Time: 15~30 sec.			
NOTE			
1.	Reference Only		

Recommended distributors for this material

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