

EMPILON® 570

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/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 11 | g/10 min | ASTM D1238 |
| Molding Shrinkage ¹ | | | |
| Flow | 0.40 | % | |
| Transverse flow | 0.90 | % | |

| Hardness | Nominal Value | Unit | Test Method |
|--|----------------|------|-------------|
| Durometer Hardness (Shore A, 10 sec) | 73 | | ASTM D2240 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress (300% Strain) | 3.53 | MPa | ASTM D412 |
| Tensile Strength | 5.79 | MPa | ASTM D412 |
| Tensile Elongation (Break) | 360 | % | ASTM D412 |
| Compression Set (23°C, 70 hr) | 24 | % | 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) | -45 | % | ASTM D573 |
| Change in Durometer Hardness in Air (Shore A, 125°C, 168 hr) | 11 | | 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 | | |

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