TPSiV® 4200-70A

THERMOPLASTIC ELASTOMER

TPSiV® thermoplastic elastomers combine the strength, toughness and abrasion resistance of any thermoplastic elastomer with the desirable properties of silicone: softness, silky feel, resistance to UV light and chemicals, and outstanding colorability. These unique materials incorporate vulcanized silicone modules in a thermoplastic matrix, but unlike traditional thermoplastic vulcanizates (TPVs), they can be recycled and reused in your manufacturing processes.

TPSiV® 4200-70A thermoplastic elastomer is a material with good chemical resistance and excellent abrasion and scratch resistance. It exhibits excellent bonding to polycarbonate, ABS and similar polar substrates. It is a product targeted for soft touch overmolding on consumer electronics, mobile communication devices, computers and sports & leisure applications.

Rheological properties

Melt mass-flow rate	27	g/10min	ISO 1133
Melt mass-flow rate, Temperature	230	°C	ISO 1133
Melt mass-flow rate, Load	10	kg	ISO 1133
Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577

Typical mechanical properties

Stress at 100% strain	3.9	MPa	ISO 527-1/-2
Stress at break	14.5	MPa	ISO 527-1/-2
Strain at break	554	%	ISO 527-1/-2
Flexural Modulus	32.8	MPa	ISO 178
Flexural Strength	2.4	MPa	ISO 178
Shore A hardness, 3s	73	-	ISO 7619-1
Compression Set at 23 °C	22	%	ISO 815
Compression Set at 70 °C	75	%	ISO 815
Tear strength, normal	48.6	kN/m	ISO 34-1

Other properties

Density	1180	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	70	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Melt Temperature Optimum	195	°C
Max. screw tangential speed	0.4	m/s

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Mold Temperature Optimum	30 °C
Min. mold temperature	20 °C
Max. mold temperature	40 °C

Characteristics

Processing	Injection Molding, Extrusion
Delivery form	Pellets
Compatibility	Polycarbonate, Styrenics, Acrylic Polymers

Processing Texts

Injection molding	TPSiV® elastomers products can be manufactured using standard thermoplastic manufacturing processes, including overmolding or co-molding with plastic substrates such as polycarbonate, ABS and nylons. TPSiV® elastomers self-adhere to hard plastics to enable unique overmolding options. The extremely silky feel of TPSiV elastomers does not require additional processing or coating steps.