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TPSiV[®] for Soft-Touch Electronics

DuPont collaborates with product designers to create soft-touch portable components, including a wireless charger that handles multiple devices at once.

Challenges

- Designers want materials with a soft, dry touch, as well as customized colors, to better engage with consumers.
- Bonding to recycled-content materials such as PC and PC/ABS (r-PC) is also required.
- Devices are used in various environments. As a result, key material performance criteria includes scratch, water, and abrasion resistance; UV stability; and chemical resistance to avoid staining.

Solutions

- Enhanced User Experience: The silky, non-tacky finish of TPSiV[®] provides a luxurious touchpoint, and resists dirt and oils.
- **Operational Efficiency:** TPSiV®'s excellent flowability ensures that thin-walled designs still have the strength and integrity required.
- **Design Freedom:** The material is easily customized to match trending colors and laser marking requirements, while providing excellent bond strength for recycled materials.



Click here to access TDS for TPSiV[®] 4000-75A SR

For more information, visit dupont.com/tpsiv

TPSiV® 4000-75A SR THERMOPLASTIC ELASTOMER (TPV)

RHEOLOGICAL PROPERTIES

Melt mass-flow rate	26 g/10min	ISO 1133
Melt mass-flow rate, Temperature	190°C	ISO 1133
Melt mass-flow rate, Load	10 kg	ISO 1133
Molding shrinkage, parallel	2.0%	ISO 294-4, 2577
Flow length	220 mm	
Flow length - pressure	8 MPa	

MECHANICAL PROPERTIES

Stress at 100% elongation	3.9 MPa	ISO 527-1/-2 or ISO 37
Stress at break	15.8 MPa	ISO 527-1/-2 or ISO 37
Elongation at break	>300%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	77	ISO 48-4 / ISO 868
Compression set at 23°C	19%	ISO 815
Compression set at 70°C, 24h	70%	ISO 815
Tear strength, normal	64 kN/m	ISO 34-1

INJECTION

Drying Recommended	yes
Drying Temperature	80°C
Drying Time, Dehumidified Dryer	2 – 6 h
Processing Moisture Content	≤0.05%
Melt Temperature Optimum	190°C
Max. screw tangential speed	0.4 m/s
Mold Temperature Optimum	30°C
Min. mold temperature	20°C
Max. mold temperature	40°C

EXTRUSION

Drying Temperature	70 - 90°C
Drying Time, Dehumidified Dryer	2 - 6 h
Processing Moisture Content	≤0.05%
Melt Temperature Range	180 - 200°C

OTHER PROPERTIES

Density

1100 kg/m³

ISO 1183

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