

INSPIRE™ TF1305 ESU

Performance Polymers

Overview Talc filled, high impact PP Compound. INSPIRE™ TF1305 ESU has been developed for highly demanding aesthetic automotive applications, with superior scratch resistance and UV light stabilisation. It is especially suitable for car interior applications requiring ductility, because of its high impact resistance, even at low temperature and requiring very high level of scratch resistance because of the location in the car interior.

Applications:

- Instrument panel retainer
- Instrument panel trim
- Mid console
- Door panels
- Door pockets
- Interior trim
- Trunk trim

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.02 g/cm ³	1.02 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	9.6 g/10 min	9.6 g/10 min	ISO 1133
Molding Shrinkage	0.0090 to 0.012 in/in	0.90 to 1.2 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	283000 psi	1950 MPa	ISO 527-2/1
Tensile Stress (Yield)	3630 psi	25.0 MPa	ISO 527-2/50
Tensile Strain (Break)	70 %	70 %	ISO 527-2/50
Flexural Modulus	268000 psi	1850 MPa	ISO 178 ^{1, 2}
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	2.4 ft-lb/in ²	5.0 kJ/m ²	
32°F (0°C)	4.8 ft-lb/in ²	10 kJ/m ²	
73°F (23°C)	12 ft-lb/in ²	25 kJ/m ²	
Multi-Axial Instrumented Impact Energy			ISO 6603-2
32°F (0°C), Ductile Failure	36.9 ft-lb	50.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	230 °F	110 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	136 °F	58.0 °C	ISO 75-2/A
Vicat Softening Temperature	275 °F	135 °C	ISO 306/A120
CLTE - Flow	0.000047 in/in/°F	0.000085 cm/cm/°C	ASTM D696

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 0.079 in/min (2.0 mm/min)

² 3 point load

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