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/cm³	1.02	g/cm³	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	9.0E-3 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 [1, 2]	268000	psi	1850	MPa	ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact Strength					ISO 180/1A
-40°F (-40°C)	2.4	ft·lb/in²	5.0	kJ/m²	
32°F (0°C)	4.8	ft·lb/in²	10	kJ/m²	
73°F (23°C)	12	ft·lb/in²	25	kJ/m²	
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	4.7E-5	in/in/°F	8.5E-5	cm/cm/°C	ASTM D696