

TAIRIREX® GP5000

Formosa Chemicals & Fibre Corporation - General Purpose Polystyrene

General Information

Product Description

General Purpose PS

Features: High flow Injection molding

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• General Purpose	• High Flow	
Uses	• General Purpose		
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
UL File Number	• E162823		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.04		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³ (73°F)	469000	psi	ASTM D638
Tensile Modulus (73°F)	493000	psi	ISO 527-1/1
Tensile Strength ⁴ (73°F)	6260	psi	ASTM D638
Tensile Stress (73°F)	6090	psi	ISO 527-2/20
Tensile Elongation ⁴ (Break, 73°F)	2.0	%	ASTM D638
Tensile Strain (Break, 73°F)	3.0	%	ISO 527-2/20
Flexural Modulus ⁵ (73°F)	441000	psi	ASTM D790
Flexural Modulus ⁶ (73°F)	493000	psi	ISO 178
Flexural Strength ⁵ (73°F)	11700	psi	ASTM D790
Flexural Stress ⁶ (73°F)	10400	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F, 0.157 in)	4.1	ft·lb/in ²	ISO 179
Notched Izod Impact (73°F, 0.250 in)	0.29	ft·lb/in	ASTM D256
Unnotched Izod Impact Strength (73°F, 0.157 in)	0.76	ft·lb/in ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ⁷ (264 psi, Annealed, 0.125 in)	181	°F	ASTM D648
Deflection Temperature Under Load ⁷ (264 psi, Annealed, 0.157 in)	192	°F	ISO 75-2/A
Vicat Softening Temperature ⁸	201	°F	ASTM D1525 ⁹
Vicat Softening Temperature ¹⁰	201	°F	ISO 306/A50
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 to 0.07 in, All Color)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Residual Monomer	< 700	ppm	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	167	°F



Drying Time	1.0 to 2.0 hr
Rear Temperature	338 °F
Middle Temperature	365 °F
Front Temperature	392 °F
Nozzle Temperature	383 °F
Processing (Melt) Temp	320 to 410 °F
Mold Temperature	68 to 158 °F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 23°C

³ 0.039 in/min

⁴ 0.20 in/min

⁵ 0.047 in/min

⁶ 0.079 in/min

⁷ 120°C/h

⁸ Annealed 80?*2hr, 1/8"

⁹ Rate A (50°C/h), Loading 1 (10 N)

¹⁰ Annealed 80?*2hr, 4mm

