

EMERGE™ PC/ABS 7710

Advanced Resin

Trinseo

Message:

EMERGE™ PC/ABS 7710 Advanced Resin is a high impact, ignition-resistant PC/ABS blend that contains no chlorine or bromine additives. It has superior processability for injection molding applications, excellent aesthetics and is available in custom colors.

Main Characteristics:

Tested under ISO 10993 (Parts 5 & 10)

Applications:

Medical equipment housings

Electrical equipment enclosures

Business equipment

General Information			
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Processability		
	High Impact Resistance		
	Pleasing Surface Appearance		
Uses	Business Equipment		
	Electrical/Electronic Applications		
	Housings		
	Medical/Healthcare Applications		
Appearance	Colors Available		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.17	g/cm ³	ASTM D792
--	1.18	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	11	g/10 min	ASTM D1238
260°C/2.16 kg	13	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.40 to 0.60	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 3.20 mm, Injection Molded)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
--	2620	MPa	ASTM D638
4.00 mm, Injection Molded	2560	MPa	ISO 527-2/1

Tensile Strength			
Yield	60.0	MPa	ASTM D638
Yield, 4.00 mm, Injection Molded	55.0	MPa	ISO 527-2/50
Break	48.3	MPa	ASTM D638
Break, 3.20 mm, Injection Molded	45.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield	3.8	%	ASTM D638
Yield, 4.00 mm, Injection Molded	3.8	%	ISO 527-2/50
Break	65	%	ASTM D638
Break, 4.00 mm, Injection Molded	43	%	ISO 527-2/50
Flexural Modulus	2690	MPa	ASTM D790
Flexural Strength (Yield)	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Injection Molded	15	kJ/m ²	
23°C, Injection Molded	40	kJ/m ²	
Notched Izod Impact			
-22°C	440	J/m	ASTM D256
-18°C	200	J/m	ASTM D256
23°C	480	J/m	ASTM D256
-30°C, Injection Molded	14	kJ/m ²	ISO 180/A
23°C, Injection Molded	50	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	90.6	°C	ASTM D648
0.45 MPa, Unannealed	88.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	79.4	°C	ASTM D648
1.8 MPa, Unannealed	77.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	104	°C	ASTM D1525, ISO 306/A120 2 ¹
--	94.0	°C	ISO 306/B50
CLTE			ASTM D696
Flow : -40 to 40°C	6.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.8E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.2E+15	ohms	IEC 60093
Volume Resistivity	1.0E+18	ohms · cm	IEC 60093
Electric Strength			IEC 60243-1
1.60 mm, in Oil	26	kV/mm	
3.20 mm, in Oil	18	kV/mm	
Relative Permittivity			IEC 60250

100 Hz	2.86		
1 MHz	2.80		
Dissipation Factor			IEC 60250
100 Hz	4.0E-3		
1 MHz	7.0E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating ²			UL 94
1.50 mm	V-0		
2.00 mm	5VB		
2.50 mm	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
1.50 mm ³	925	°C	
2.00 mm ⁴	925	°C	
2.50 mm	925	°C	
3.00 mm ⁵	950	°C	
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	230 to 270	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	Rate B (120°C/h), Loading 1 (10 N)		
2.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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