

EMERGE™ PC/ABS 7710 NA

Advanced Resin

Trinseo

Message:

EMERGE™ PC/ABS 7710 NA 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:

RoHS Compliant

Applications:

Electrical housings

Electrical equipment enclosures

Business equipment

General Information			
UL YellowCard	E213639-101888230	E54680-101355620	
Features	Chlorine Free		
	Impact resistance, high		
	Workability, good		
	Good appearance		
	Bromine-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Electrical housing		
	Business equipment		
	Shell		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
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
240°C/5.0 kg	20	g/10 min	ASTM D1238
260°C/2.16 kg	13	g/10 min	ISO 1133
shrinkage-Flow	0.40 - 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, injection molding	2560	MPa	ISO 527-2/1
Tensile Strength			
Yield	60.0	MPa	ASTM D638
Yield, 4.00mm, injection molding	55.0	MPa	ISO 527-2/50
Fracture	48.3	MPa	ASTM D638
Fracture, 3.20mm, injection molding	45.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield	3.8	%	ASTM D638
Yield, 4.00mm, injection molding	3.8	%	ISO 527-2/50
Fracture	65	%	ASTM D638
Fracture, 4.00mm, injection molding	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 molding	15	kJ/m ²	ISO 179/1eA
23°C, injection molding	40	kJ/m ²	ISO 179/1eA
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 molding	14	kJ/m ²	ISO 180/A
23°C, injection molding	50	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	90.6	°C	ASTM D648
0.45 MPa, not annealed	88.0	°C	ISO 75-2/B
1.8 MPa, not annealed	79.4	°C	ASTM D648
1.8 MPa, not annealed	77.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	104	°C	ASTM D1525, ISO 306/A120 3 ¹
--	94.0	°C	ISO 306/B50
Linear thermal expansion coefficient			ASTM D696
Flow: -40 to 40°C	6.8E-5	cm/cm/°C	ASTM D696
Lateral: -40 to 40°C	6.8E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.2E+15	ohms	IEC 60093
Volume Resistivity	1.0E+18	ohms · cm	IEC 60093

Dielectric Strength			IEC 60243-1
1.60mm, in oil	26	kV/mm	IEC 60243-1
3.20mm, in oil	18	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	2.86		IEC 60250
1 MHz	2.80		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	4.0E-3		IEC 60250
1 MHz	7.0E-3		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating ²			UL 94
1.5 mm	V-0		UL 94
2.0 mm	5VB		UL 94
2.5 mm	5VA		UL 94
Glow Wire Flammability Index ³			IEC 60695-2-12
1.5 mm	925	°C	IEC 60695-2-12
2.0 mm	925	°C	IEC 60695-2-12
2.5 mm	925	°C	IEC 60695-2-12
3.0 mm	950	°C	IEC 60695-2-12
Oxygen Index ⁴	28	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	80 - 90	°C	
Drying Time	3.0 - 4.0	hr	
Processing (Melt) Temp	230 - 270	°C	
Mold Temperature	60 - 90	°C	
NOTE			
1.	标准 B (120°C/h), 压力1 (10N)		
2.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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