

# EMERGE™ PC/ABS 7700 NA

Advanced Resin

Trinseo

Message:

EMERGE™ PC/ABS 7700 NA Advanced Resin is an ignition-resistant PC/ABS blend that contains no chlorine or bromine additives. It has superior processability for injection molding applications. This grade has excellent aesthetics, is UV stabilized and is available in custom colors.

Main Characteristics:

RoHS Compliant

Applications:

Electrical housings

Consumer Electronics

Information technology equipment

General Information			
UL YellowCard	E213639-101888230	E54680-101355620	
Additive	UV stabilizer		
Features	Chlorine Free		
	Impact resistance, high		
	Workability, good		
	Good appearance		
	Bromine-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Electrical housing		
	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 <sup>3</sup>	ASTM D792
--	1.18	g/cm <sup>3</sup>	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
Molding Shrinkage			
Flow	0.40 - 0.60	%	ASTM D955
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			
3.20, injection molding	2620	MPa	ASTM D638
4.00, injection molding	2560	MPa	ISO 527-2/1
Tensile Strength			
Yield, 3.20mm, injection molding	60.0	MPa	ASTM D638
Yield, 4.00mm, injection molding	55.0	MPa	ISO 527-2/50
Fracture, 3.20mm, injection molding	48.3	MPa	ASTM D638
Fracture, 4.00mm, injection molding	45.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield, 3.20mm, injection molding	3.8	%	ASTM D638
Yield, 4.00mm, injection molding	3.8	%	ISO 527-2/50
Fracture, 3.20mm, injection molding	65	%	ASTM D638
Fracture, 4.00mm, injection molding	43	%	ISO 527-2/50
Flexural Modulus (3.20 mm, Injection Molded)	2690	MPa	ASTM D790
Flexural Strength (3.20 mm, Injection Molded)	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 <sup>2</sup>	ISO 179/1eA
23°C, injection molding	40	kJ/m <sup>2</sup>	ISO 179/1eA
Notched Izod Impact			
-18°C, 3.20mm, injection molding	200	J/m	ASTM D256
-7°C	440	J/m	ASTM D256
23°C, 3.20mm, injection molding	480	J/m	ASTM D256
-30°C, injection molding	14	kJ/m <sup>2</sup>	ISO 180/A
23°C, injection molding	50	kJ/m <sup>2</sup>	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 <sup>1</sup>
--	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 <sup>2</sup>			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 <sup>3</sup>			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 <sup>4</sup>	28	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	82 - 88	°C	
Drying Time	3.0 - 4.0	hr	
Processing (Melt) Temp	238 - 274	°C	
Mold Temperature	60 - 91	°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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