

EMERGE™ PC/ABS 7700 EU

Advanced Resin

Trinseo

Message:

EMERGE™ PC/ABS 7700 EU 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:

Tested under ISO 10993 (Parts 5 & 10)

Applications:

Medical equipment housings

General Information			
UL YellowCard	E213639-101888230	E54680-101355620	
Additive	UV stabilizer		
Features	Chlorine Free		
	Workability, good		
	Good appearance		
	Bromine-free		
	Flame retardancy		
Uses	Shell		
	Medical/nursing supplies		
Agency Ratings	ISO 10993 Part 10		
	ISO 10993 Part 5		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	12	g/10 min	ISO 1133
shrinkage-Flow	0.40 - 0.60	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
3.20, injection molding	2550	MPa	ASTM D638
4.00, injection molding	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield, 3.20mm, injection molding	57.0	MPa	ASTM D638
Yield, 4.00mm, injection molding	56.0	MPa	ISO 527-2/50
Fracture, 3.20mm, injection molding	48.0	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	100	%	ASTM D638
Fracture, 4.00mm, injection molding	52	%	ISO 527-2/50
Flexural Modulus (23°C, 4.00 mm, Injection Molded)	2450	MPa	ASTM D790
Flexural Strength (23°C, 4.00 mm, Injection Molded)	86.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, injection molding	16	kJ/m ²	ISO 179/1eA
23°C, injection molding	50	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ISO 180/A
-30°C, injection molding	17	kJ/m ²	ISO 180/A
23°C, injection molding	50	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	89.0	°C	ISO 75-2/B
1.8 MPa, not annealed	78.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	104	°C	ISO 306/A120
--	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			UL 94
1.5 mm ¹	V-0		UL 94
2.0 mm ²	5VB		UL 94

2.5 mm ³	5VA	UL 94
Glow Wire Flammability Index ⁴ (2.0 mm)	960	°C IEC 60695-2-12
Injection	Nominal Value	Unit
Drying Temperature	80 - 90	°C
Drying Time	3.0 - 4.0	hr
Processing (Melt) Temp	240 - 275	°C
Mold Temperature	60 - 90	°C

NOTE

1. This rating is not intended to reflect the danger caused by this or any other material under actual fire conditions.

2. This rating is not intended to reflect the danger caused by this or any other material under actual fire conditions.

3. This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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