

# EMERGE™ PC/ABS 7100 MED Advanced Resin

## Overview

EMERGE™ PC/ABS 7100 MED Advanced Resin exhibits a balance of properties between impact strength, heat resistance and processability. It has excellent flow and is ideal for injection molding in thin-wall applications. This resin is available in natural and custom colors. EMERGE PC/ABS 7100 MED resin is compliant with ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications.

Main Characteristics:

- Tested under ISO 10993

Applications:

- Medical Applications

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.11 g/cm <sup>3</sup>	1.11 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
230°C/3.8 kg	4.5 g/10 min	4.5 g/10 min	
260°C/5.0 kg	25 g/10 min	25 g/10 min	
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ASTM D638
0.126 in (3.20 mm), Injection Molded	320000 psi	2210 MPa	
Tensile Strength <sup>1</sup>			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	7300 psi	50.3 MPa	
Tensile Elongation			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	4.0 %	4.0 %	
Break, 0.126 in (3.20 mm), Injection Molded	50 %	50 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	340000 psi	2340 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	11600 psi	80.0 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-22°F (-30°C), 0.126 in (3.20 mm), Injection Molded	5.5 ft-lb/in	290 J/m	
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	9.0 ft-lb/in	480 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
R-Scale, 0.126 in (3.20 mm), Injection Molded	112	112	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm), Injection Molded	241 °F	116 °C	
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm), Injection Molded	203 °F	95.0 °C	
Vicat Softening Temperature	271 °F	133 °C	ASTM D1525 <sup>2</sup>
CLTE - Flow	4.2E-5 in/in/°F	7.6E-5 cm/cm/°C	ASTM D696

<b>Flammability</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Flame Rating <sup>3</sup> (0.04 in (1.0 mm))	HB	HB	UL 94
<b>Additional Information</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	
Drying Temperature			
<b>Injection</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	
Drying Temperature	176 °F	80 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	
Processing (Melt) Temp	460 to 510 °F	238 to 266 °C	
Mold Temperature	120 to 195 °F	49 to 91 °C	

### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> 2.0 in/min (51 mm/min)

<sup>2</sup> Rate B (120°C/h), Loading 1 (10 N)

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



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