

Technical Information



PLEXIGLAS® R-Life V825T RED CR50

Overview

PLEXIGLAS® R-Life V825T RED CR50 is an injection grade acrylic resins with applicability in automotive rear lighting applications.

It is made with 50% of recycled MMA monomer obtained by depolymerization of pre- and post-consumer waste streams according to ISO 14021 to lower the CO2 footprint, while meeting the same demanding requirements as its all-prime counterpart (outstanding optical properties, hardness, stiffness, UV stability, lightweight).

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.19 g/cm ³	1.19 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	3.0 g/10 min	3.0 g/10 min	ISO 1133
Molding Shrinkage - Flow	2.0E-3 to 6.0E-3 in/in	0.20 to 0.60 %	ASTM D955
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.30 %	0.30 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress (Break, 73°F (23°C))	10600 psi	73.0 MPa	ISO 527-2/5
Tensile Strain (Break, 73°F (23°C))	5.0 %	5.0 %	ISO 527-2/5
Flexural Modulus ¹	479000 psi	3300 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	0.95 ft·lb/in ²	2.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	ISO 179/1eU
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (M-Scale)	97	97	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Annealed	212 °F	100 °C	ISO 75-2/A
Vicat Softening Temperature	225 °F	107 °C	ISO 306/B50
CLTE - Flow	3.6E-5 in/in/°F	6.5E-5 cm/cm/°C	ASTM D696
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	185 to 194 °F	85 to 90 °C	
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr	
Rear Temperature	428 to 464 °F	220 to 240 °C	
Middle Temperature	446 to 482 °F	230 to 250 °C	
Front Temperature	464 to 500 °F	240 to 260 °C	
Nozzle Temperature	464 to 500 °F	240 to 260 °C	
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C	
Mold Temperature	158 to 176 °F	70 to 80 °C	

Notes

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

¹ 0.079 in/min (2.0 mm/min)

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