



ACRYREX® CM-205

CHI MEI CORPORATION - Polymethyl Methacrylate Acrylic

Sunday, November 3, 2019

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• SAE J576		
Resin ID (ISO 1043)	• >PMMA<		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.19		ASTM D792
Density (73°F)	1.19	g/cm ³	ISO 1183
Apparent (Bulk) Density	0.70	g/cm ³	ASTM D1182
Melt Mass-Flow Rate (230°C/3.8 kg)	1.8	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	1.90	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow	2.0E-3 to 6.0E-3	in/in	ASTM D955
Molding Shrinkage	0.20 to 0.60	%	ISO 294-4
Water Absorption (Saturation)	0.30	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	725	psi	ISO 527-2/50
Tensile Strength ³ (Break)	10600	psi	ASTM D638
Tensile Stress (Break)	10200	psi	ISO 527-2/50
Tensile Elongation ³ (Break)	10	%	ASTM D638
Tensile Strain (Break)	70	%	ISO 527-2/50
Flexural Modulus ⁴	1.49E+7	psi	ISO 178
Flexural Strength ⁵	17000	psi	ASTM D790
Flexural Stress ⁴	1740	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (-22°F)	0.95	ft-lb/in ²	ISO 179
Notched Izod Impact (73°F, 0.252 in)	0.37	ft-lb/in	ASTM D256
Notched Izod Impact Strength (-22°F)	0.95	ft-lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	95		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	203	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	219	°F	ISO 75-2/A
Vicat Softening Temperature	239	°F	ASTM D1525 ⁶
Vicat Softening Temperature	239	°F	ISO 306/B50
CLTE - Flow	3.3E-5	in/in/°F	ISO 11359-2
Heat Deflection Temperature - Unannealed	216	°F	ASTM D648
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94

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Optical	Nominal Value	Unit	Test Method
Refractive Index	1.491		ASTM D542
Transmittance	92.0	%	ASTM D1003

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	185 to 194	°F
Drying Time	4.0	hr
Rear Temperature	365 to 401	°F
Middle Temperature	428 to 464	°F
Front Temperature	410 to 446	°F
Mold Temperature	122 to 158	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 23°C

³ 0.24 in/min

⁴ 0.079 in/min

⁵ 0.11 in/min

⁶ Rate A (50°C/h), Loading 1 (10 N)