



# ACRYREX® CM-205

CHI MEI CORPORATION - Polymethyl Methacrylate Acrylic

Sunday, August 16, 2015

## 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		

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19		ASTM D792
Density (73°F)	1.19	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (230°C/3.8 kg)	1.8	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	0.281	in <sup>3</sup> /10min	ISO 1133

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (0.125 in)	10200	psi	ASTM D638
Tensile Stress (Yield)	10600	psi	ISO 527-2/50
Tensile Stress (Break)	10600	psi	ISO 527-2/50
Tensile Elongation <sup>2</sup> (Break, 0.125 in)	5.0	%	ASTM D638
Tensile Strain (Break)	10	%	ISO 527-2/50
Flexural Modulus <sup>3</sup>	406000	psi	ISO 178
Flexural Strength <sup>4</sup> (0.250 in)	15600	psi	ASTM D790
Flexural Stress <sup>3</sup>	14900	psi	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
--	0.95	ft·lb/in <sup>2</sup>	ISO 179
--	0.95	ft·lb/in <sup>2</sup>	ISO 179/2C
Charpy Unnotched Impact Strength			
--	12	ft·lb/in <sup>2</sup>	ISO 179
--	10	ft·lb/in <sup>2</sup>	ISO 179/2U
Notched Izod Impact (73°F, 0.250 in)	0.37	ft·lb/in	ASTM D256
Notched Izod Impact Strength	0.95	ft·lb/in <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact Strength	10	ft·lb/in <sup>2</sup>	ISO 180/1U

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale, 0.250 in)	97		ASTM D785
Ball Indentation Hardness (H 358/30)	22900	psi	ISO 2039-1

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load <sup>5</sup>			ASTM D648
264 psi, Unannealed, 0.250 in	212	°F	
Heat Deflection Temperature (264 psi, Unannealed)	189	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	223	°F	ISO 75-2/A
Vicat Softening Temperature	235	°F	ASTM D1525 <sup>6</sup>

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature			
--	246	°F	ISO 306/A50
--	241	°F	ISO 306/A120
--	226	°F	ISO 306/B50
--	226	°F	ISO 306/B120
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.0625 in)			
	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance (125 mil)	92.0	%	ASTM D1003

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 0.24 in/min

<sup>3</sup> 0.079 in/min

<sup>4</sup> 0.11 in/min

<sup>5</sup> 120°C/hr

<sup>6</sup> Rate A (50°C/h)