

# Marvel™ M20

Linear Low Density Polyethylene  
SCG Chemicals Co., Ltd.

Message:

M3804RU and Marvel M20 are linear-low density polyethylene (LLDPE) for rotational molding applications. Marvel M20 is a color-compounded polyethylene specifically developed for rotational molding applications. With a balance of stiffness and toughness, a large processing window and a wide variety of color selection. Marvel M20 is the recommended material for toys, playground equipment, and other general rotomolded articles.

General Information			
Features	Rigid, good		
	Workability, good		
	Good color stability		
	Good toughness		
	Compliance of Food Exposure		
Uses	Water Sports Equipment		
	Safety equipment		
	Lawn and Garden Equipment		
	Industrial container		
	Architectural application field		
	Application in Automobile Field		
	Toys		
Agency Ratings	FDA 21 CFR 177.1520(c)		
Appearance	Available colors		
Forms	Powder		
Processing Method	rotomolding		
Physical	Nominal Value	Unit	Test Method
Density	0.938	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	60		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup>			ASTM D638
Yield	20.0	MPa	ASTM D638
Fracture	18.0	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break)	800	%	ASTM D638
Flexural Modulus	700	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (0.45 MPa, Unannealed)	70.0	°C	ASTM D648
Brittleness Temperature	< -60.0	°C	ASTM D746
Vicat Softening Temperature	120	°C	ASTM D1525
Melting Temperature	125	°C	ASTM D2117
Crystallization Point	113	°C	ASTM D2117

#### Additional Information

ARM Impact Strength, ARM MMethod, -40°C, 5mm, Rotomolded: 19 J/mmTypical Oven Temperature: 250 to 300°C

#### NOTE

1. 50 mm/min
2. 50 mm/min

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#### Recommended distributors for this material

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