

Marvel™ M50

Polyethylene Copolymer
SCG Chemicals Co., Ltd.

Message:

M3504DXP and Marvel M50 are powder and compounded form of Dowlex NG2429 which are linear-low density polyethylene octene copolymer for rotational molding applications. M50 is a color compounded form which are specifically designed for applications requiring excellent environmental stress crack resistance and impact strength combined with low warpage and good processing. It is fully heat and UV stabilized resulting in a wide processing latitude, good color retention, and long life expectancy. Both of them are recommended for large and thick tanks with a generous radius and curve.

General Information	
Additive	heat stabilizer
	UV stabilizer
Features	Low warpage
	Rigidity, high
	High ESCR (Stress Cracking Resistance)
	Copolymer
	Impact resistance, high
	Workability, good
	Good color stability
	Thermal Stability
	Good toughness
	Compliance of Food Exposure
	Octene comonomer
Uses	Water Sports Equipment
	Low temperature application
	Industrial container
	Drum
	Container
	Water tank
Agency Ratings	FDA 21 CFR 177.1520(c)
Appearance	Black
	Available colors
Forms	Powder
	Particles
Processing Method	rotomolding

Physical	Nominal Value	Unit	Test Method
Density	0.935	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (100% Antarox, F50)	> 1000	hr	ASTM D1693
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	57		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-2
Yield	17.0	MPa	ISO 527-2
Fracture	25.0	MPa	ISO 527-2
Tensile Strain (Break)	800	%	ISO 527-2
Flexural Modulus - 1% Secant	640	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
ARM Impact	230	J/cm	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	75.0	°C	ASTM D648
Vicat Softening Temperature	118	°C	ISO 306/A120
Melting Temperature	125	°C	DSC
Peak Crystallization Temperature (DSC)	105	°C	ISO 3146
Additional Information			

Typical Oven Temperature: 250 to 300°C

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

