

# Prime PE HMWPE 1000 Swirl

High Molecular Weight Polyethylene

Primex Plastics Corporation

## Message:

This product consists of a HMWPE substrate with a three-color swirlcap of HMWPE. The swirl can be on one or both sides of the sheet. The thickness can be varied to suit your specific material requirements and draw ratios.

### Applications:

Applications so far have consisted of playground equipment, camouflage deer blinds, canoes, and other sporting equipment.

### Processing:

This is a crystalline material, therefore, good forming practices should be applied when forming this product. Forming temperature is 310-360°F. Mold temperature should be 160-200°F. Aluminum mold with grit blasted surface is preferred. The tool should be designed with a moat on the outside of the trim line. Mold shrink is .016 - .028 in/in.

### Finishing:

Prime HMWPE 1000 Swirl can be fabricated by using techniques such as; drilling, routing, punching, sawing and cutting with a die, laser or water jet.

Mechanical screws and other type of fasteners can be used. The CLTE is high, therefore, movement of the part must be considered.

Please contact your Primex Plastics representative for more information on finishing, fabricating, or the thermoforming process.

### Colors, Textures and Capabilities:

Prime HMWPE 1000 Swirl can be color matched to meet your specific requirements. Prime HMWPE 1000 Swirl is extruded in gauges of .100 to .300 and up to 90" in width. Textures include; Smooth or Levant II.

General Information			
Features	Crystalline		
	High Molecular Weight		
Uses	Sporting Goods		
Agency Ratings	FDA 21 CFR 177.1520		
Appearance	Colors Available		
Forms	Sheet		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.947	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	1.6 to 2.8	%	
Environmental Stress-Cracking Resistance (F50)	> 600	hr	ASTM D1693A
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	24.8	MPa	ASTM D638
Tensile Elongation (Break)	> 600	%	ASTM D638
Flexural Modulus	1170	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -90.6	°C	ASTM D746
Vicat Softening Temperature	124	°C	ASTM D1525
Flammability	Nominal Value	Test Method	
Flame Rating <sup>1</sup> (1.52 mm)	HB	UL 94	
Flammability (> 1.52 mm)	Pass	FMVSS 302	
Forming Temperature	154 to 182	°C	
Mold Temperature (other)	71 to 93	°C	

## NOTE

1. >0.060 in

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## Recommended distributors for this material

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