Prime PE HMWPE 1000

High Molecular Weight Polyethylene

Primex Plastics Corporation

Message:

Prime HMWPE 1000 is a high molecular weight polyethylene with excellent balance of stress crack resistance, stiffness and melt strength. It also has good rigidity and impact strength even at low temperatures. These properties make this product ideal for thermoforming large parts.
Applications:
Some ideal applications for Prime HMWPE 1000 include cattle feeders, pallets, truck bed liners, portable toilets, totes and any other parts that require the attributes mentioned above.
Processing:
This is a crystalline material, therefore, good forming practices should be used when working with this material. Forming temperature is 310-360°F. Mold temperature should be 160-200°F. Aluminum, grit blasted molds are preferred and should be designed with a moat if possible. Mold shrink is .016 to .028 in./in.
Finishing:
Prime HMWPE 1000 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. Expansion/Contraction must be considered when working with Prime HMWPE 1000.
Please contact your Primex Plastics representative for more information on finishing, fabricating, or the thermoforming process.
Colors, Textures and Capabilities:
Prime HMWPE 1000 can be color matched to meet your specifications. Gauges are available from .015 up to .425 and in widths up to 169". Textures available include the following; Levant II, HC, Calf Grain, RM, and Seville.

General Information	
Features	Bondability High ESCR (Stress Crack Resist.) High Tensile Strength Low Temperature Impact Resistance Ultra High Impact Resistance Ultra High Molecular Weight
Uses	Liners Pallets Support Trays
Agency Ratings	FDA 21 CFR 177.1520
Appearance	Colors Available
Forms	Sheet
Processing Method	Extrusion Thermoforming

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.947	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	10	g/10 min	ASTM D1238
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	126	°C	ASTM D1525
Flammability	**Nominal Value**		**Test Method**
Flame Rating (> 1.52 mm)	HB		UL 94
Additional Information	**Nominal Value**	**Unit**	
Forming Temperature	154 to 182	°C	
Mold Temperature	71 to 93	°C	

Recommended distributors for this material

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