

UHMW-PE

(ultra high molecular weight polyethylene)

POLYSTONE® M



Polyethylene is a low cost, chemically resistant plastic material that can be used for a wide variety of applications. The versatility of polyethylene has made it one of the world's most popular plastics. Polyethylene is available in a number of grades according to its molecular weight.

UHMW-PE (ultra high molecular weight polyethylene) is an extremely tough and abrasion resistant thermoplastic that is used for applications that require durability and/or abrasive wear resistance.

UHMW sheet is often used for lining chutes and hoppers in order to protect metal surfaces and promote the flow of solid materials such as sand, wood chips, or coal. UHMW is also used for packaging, conveyor, and food processing machinery parts including star wheels, idler sprockets, and under-chain wear strips.



KEY CHARACTERISTICS:

- Extremely tough and durable
- Low friction
- Excellent abrasion resistance
- Good chemical resistance
- Low water absorption
- Easy to fabricate
- Reprocessed grades available
- Enhanced bearing and wear grades available
- FDA compliant grades available

APPLICATIONS:

- Chute liners and hopper liners
- Wear strips
- Star wheels
- Idler sprockets
- Packaging machinery components
- Food processing machinery components

POLYETHYLENE TYPICAL PROPERTIES:

	UNITS	ASTM TEST	LDPE	HDPE	UHMW-PE
Tensile strength	psi	D-638	1,400	4,000	3,100
Flexural modulus	psi	D-790	30,000	200,000	110,000
Izod impact (notched)	ft-lbs/in of notch	D-256	no break	1.3	18.0*
Heat deflection temperature @66 psi	°F	D-648	122	172	-
Maximum continuous service temperature in air	°F		-	-	180
Water absorption (immersion 24 hours)	%	D-570	0.10	0.10	slight
Coefficient of linear thermal expansion	in/in/°Fx10 ⁻⁵	D-696	-	7.0	11.1

UHMW Standard Sizes: SHEET: 48"x96" (0.062"-4.0" thick), 48"x120" (0.062"-7.0" thick), 48"x144" (0.375"-4.0" thick), 60"x96" (0.375"-4.0" thick), 60"x120" (0.375"-4.0" thick) POLYSTONE® MEGASHEET: 96"x240" (0.375"-4.0" thick) ROD: diameter 0.25"-10.00" TUBE: diameter 2.0"-9.398"

Length, width, thickness, and diameter tolerances vary by size and by manufacturer • Custom sizes and colors available upon request • Many of our materials are available as films with thicknesses of 0.029" or less. Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand. *Double-15° notch

Curbell Plastics has been supplying plastic sheet, rod, tube, films, adhesives, sealants, and prototyping materials for over 65 years



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