

UHMW

Extremely tough, abrasion resistant, low cost plastic, used for a wide range of wear applications



UHMW (ultra high molecular weight polyethylene) is an extremely tough plastic with high abrasion and wear resistance. The versatility of polyethylene has made it a popular plastic for countless industrial applications that require durability, low friction, and chemical resistance.

UHMW Material Options

UHMW Liners – UHMW sheet is often used for lining chutes and hoppers to protect metal surfaces and to keep solid materials like sand, wood chips, or coal moving smoothly.

UHMW Parts – Easy to fabricate, UHMW is also used for packaging, conveyor, and food processing machinery parts including star wheels, idler sprockets, and under-chain wear strips.

UHMW Wood Replacement – UHMW offers very low moisture absorption and is a popular choice for marine construction applications like dock fender pads, pile guards, and anti-skid walkways. UHMW does not corrode, rot, or splinter like wood.

UHMW Grades – Several grades of UHMW are available, including reprocessed, enhanced bearing and wear, and FDA compliant.

UHMW is widely used for:

- Chute, hopper, and truck bed liners
- Wear strips and guide rails
- Star wheels and idler sprockets
- High speed conveyors
- Packaging machinery parts
- Food processing machinery parts
- Bumpers, pile guards, and dock fenders

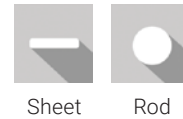
Performance characteristics:

- Extremely tough and durable
- Low friction
- Excellent abrasion resistance
- Good chemical resistance
- Low moisture absorption
- Easy to fabricate

Common brands:

- Polystone® M
- Tivar®
- GUR®

Available in:



Sheet

Rod

TYPICAL PROPERTIES OF UHMW

	UNITS	ASTM TEST	UHMW-PE
Tensile strength	psi	D638	3,100
Flexural modulus	psi	D790	110,000
Izod impact (notched)	ft-lbs/in of notch	D256	18.0*
Heat deflection temperature @ 264 psi	°F	D648	-
Maximum continuous service temperature in air	°F		180
Water absorption (immersion 24 hours)	%	D570	slight
Coefficient of linear thermal expansion	in/in/°F $\times 10^{-5}$	D696	11.1

*Double -15° notch

Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.