



Alro Plastics

Your Source for Engineering Plastics

Sheet • Rod • Tube • Film • Profiles • Machined Parts

Are you concerned about recent announcements of major price increases and potential shortages for plastic materials such as UHMW?

Are you seeking a more cost effective alternative?

Alro Plastics has invested a significant amount of time and money to assist our customers in identifying less expensive alternatives to UHMW. The result is two different polyethylene materials that may be worth your consideration. Depending on your specific application and the environment, one or both of these materials may be right for your application.

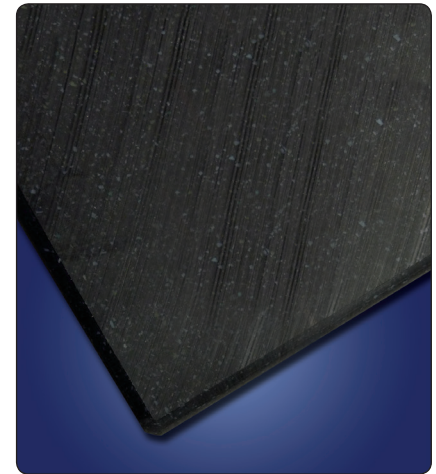
King Hy-Pact

- Opaque White
- Smooth finish
- FDA and USDA compliant
- U.V. Stabilized
- Tighter thickness tolerance
- Extremely flat / Low stress
- Good abrasion resistance
- 1/8" to 1" thickness range
- 48" x 120" sheet size



Reprocessed UHMW

- Black (possible small, white specs)
- Standard UHMW finish
- Not FDA or USDA compliant
- Not U.V. Stabilized
- Standard thickness tolerance
- Standard UHMW flatness / stress
- Better abrasion resistance than VHMW
- 1/8" to 6" thickness range
- 48" x 120" sheet size



We have negotiated special pricing and purchased sheets in many popular sizes... making them available for same day shipping. We also offer cut-to-size services as well as for those customers who want to eliminate that step of the process. We hope one or both of these products will be of value to you. Please refer to the back side of this flyer for a complete properties comparison.

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Polyethylene Comparison Chart

Properties	Units	ASTM	HDPE	VHMW	Repro UHMW	UHMW
Density	g/cc	D1505	.955	.950	.935	.930
Tensile Strength @ Yield	PSI	D638	>4,100	>3,800	>3,000	>2,800
Elongation @ Break	%	D638	>600	>800	>200	450
Flexural Modulus	PSI	D790	185,000	155,000	n/a	160,000
Durometer	Shore D	D2240	68	65	63 - 69	62
Izod Impact Strength	J/M	D256	1.1	No Break	No Break	No Break
Brittleness Temperature	°C	D746	< -76	< -38	n/a	< -38
Vicat Softening Temp.	°C	D1525	123	124	n/a	128
Heat Deflection Temp. @ 66 PSI	°C	D648	75	71	n/a	82
Co-efficient of Linear Thermal Expansion	in./in./°F	D696	6.0 x 10 ⁻⁵	7.0 x 10 ⁻⁵	19.0 x 10 ⁻⁵	11.0 x 10 ⁻⁵
Thickness Tolerance	n/a	n/a	+/- 10%	+/- 5%	+/- 10%	+/- 10%

* All values are determined on specimens prepared according to ASTM D1248. All values listed are nominal and should not be interpreted as specifications.

Abrasion Resistance

Relative Volumetric Abrasion	Sand Slurry Test
Hy-Pact S/R-12 Polymer (UHMW-PE)	12
Reprocessed UHMW (UHMW-PE)	18
Hy-Pact S/R-03 Polymer (VHMW-PE)	40
High Density Polyethylene (HDPE)	110

* Abrasion resistance is measured as weight loss after pieces are spun eight hours at 170 rpm in a 50-50 sand-water mixture. Carbon steel is arbitrarily assigned the value of 100, lower values indicate less weight loss and therefore greater resistance.



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