

Stress Relieving

Westlake POMALUX rod and heavy gauge sheet are stress relieved for close tolerance machining and dimensionally stable parts. A secondary annealing step may be recommended if a significant amount of material is machined and very close tolerances are required. Contact Westlake for guidelines.

Machining and Fabricating

POMALUX unfilled stock shapes and reinforced heavy gauge sheet are easily sawed, cut, drilled, turned, milled, filed, threaded, taped, bored, reamed, punched and otherwise worked on standard metal working equipment, using conventional tools and techniques. Only sharp tools should be used allowing adequate room for chip clearance. Because POMALUX stock shapes have excellent chemical resistance, standard cutting oils and coolants may be used in addition to water or air. This is an important consideration for machine shop and screw machine companies because many other plastics require a change of lubricants.

Bonding

Because acetal copolymer is highly chemical resistant, many adhesives will not provide good bond strength. However, there are some epoxy and polyester-isocyanate systems which are available. POMALUX products can also be welded by spin, ultrasonic, hot plate, hot wire and other methods.

Acetal Copolymer Resin Properties

General Properties	Temp.	Units	ASTM Test	Unfilled	25% GF
Physical					
Specific Gravity	73°F	gms/cc	D792	1.40-1.41	1.59
Water Absorption 24 hours	73°F	%	D570	0.22	0.29
Mechanical					
Tensile Strength Yield	73°F	psi	D638	8,800-10,150	16,000
Tensile Elongation Break	73°F	%	D638	30-70	2-3
Tensile Modulus	73°F	10 ³ psi	D638	410	1200
Flexural Modulus	73°F	10 ³ psi	D790	370-390	1,050
Izod Impact					
Notched	-40°F	ft-lbs/in	D256	1.2	—
Notched	73°F	ft-lbs/in	D256	1.5	1.1
Compressive Strength		10 ³ psi	D695	4.5(1%)16(10%)	—
Hardness Rockwell	73°F		D785	M75	M80
Thermal					
Deflection Temp. 264 psi		°F	D648	219-230	322
66 psi		°F	D648	315	331
Cof. of Thermal Exp.		in/in/°F	D696	4.7x10 ⁻⁵	2.2x10 ⁻⁵
Thermal Conductivity		BTU/Hr/Sq.Ft/°F/in		1.6	—
Flammability rating, UL94		Thickness @.060"		HB	—
Other Properties	Consult Westlake				

ESD (Static Dissipative and Conductive Products)

POMALUX SD and CN

Made from static dissipative (non-carbon filled) and conductive (carbon fiber filled) acetal copolymer resins. Contact Westlake for details.

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Product Availability

Unfilled POMALUX

Rod

Extruded (stress relieved)
Diameters: from 1/8" to 8"
Lengths: varying lengths by diameter

Heavy Gauge Sheet

Compression Molded (stress relieved)
Thicknesses: 1/4" to 2"
Standard Sizes: 24"x 48", 48"x 96",
48"x 120" and 60"x 120". Max. size 61"x 121".
Finishes: polished, sand blasted, haircell,
dimpled and custom finishes.

Heavy Gauge Sheet

Extruded (stress relieved)
Thicknesses: from 2 1/2" to 6"
Widths: 12" to 24"
Lengths: 48". Custom lengths also available.

Thin Gauge Sheet

Extruded
Thicknesses: .060" to 3/16"
Widths: to 48"
Lengths: Standard is 96" but continuous
lengths are also available.

Film

Extruded
Thicknesses: .001" to .029" available
Widths: up to 24" to 26"
Lengths: roll form
Finishes: polish/matte, haircell/matte and
custom finishes.
Runs can be as small as 200 lbs.

Custom Products

Non-standard sizes, colors and grades
(bearing and various fillers) are also
available on a custom basis.
Custom profiles including heavy wall
tubing are also available.

Glass Reinforced POMALUX

Heavy Gauge Sheet

(stress relieved)
Thicknesses: 3/8" to 4"
Widths: 12", 24" and 48"
Lengths: 48". Custom sizes also available.

Stock Colors

Natural (White), Black.
Rod in a variety of colors.

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