

Precision Cast Urethane Extruded Profile / Injection Molding

Web Page:
www.harknessindustries.com

Urethane Sheets—Bars—Rods—Tubes

Now 48" x 96" Sheet !



Sheet (Precision Cast):

Available in thicknesses of 1/32" to 2" thick. In sheet sizes of 12" x 12" to 48" x 48" Tolerances of 1/32" to 3/16" (+/- .010"), 1/4" to 3/8" (+/- .015"), 1/2" to 1-1/4" (+/- .025") and over 1-1/2" (+/- 3%).

Fabric-Backed Sheets:

Stocked in 3/16" to 9/16" in 48" x 48" sheets. Custom sizes available on special order

Bars:

Stocked in 1" square, 2" square & 2" x 3" sizes in 48" lengths. Custom sizes on request.

Rods:

Cast in sizes of 1/4" to 6" Diameter in 36" Long lengths. Custom sizes on request

Tubes:

Standard tube is cast in 36" lengths,

Harkness Industries was founded in 1960 as an injection molding company serving the needs of the Northeast. In 1985, Harkness acquired the urethane sheet, rod, tube and bar business from J.P. Stevens and in 1989 the custom urethane parts business from the Lord Corporation.

Today, Harkness is a leading high quality supplier of precision cast urethane products. In addition, the company is a custom injection molder and profile extruder of all major engineering grade thermoplastics.

Standard size stock shapes & custom molded products. Don't Lose the Order Call Harkness Industries. !



8 Standard Grades and Variety of Colors to Suit Your Particular Needs.

Harkness keeps a lot of standard urethane materials in stock for immediate shipment. But also think of Harkness for:



Custom Extruded Profile-in mechanical & high performance plastics. Medium quantity runs.



Custom Injection Molded Parts-in mechanical & high performance plastics. Specializing in complicated low quantity runs. Send a print today.

ID 1"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"	2-3/4"	3"
OD 2"	2-1/4"	2-1/2"	2-3/4"	3"	3-1/4"	3-1/2"	2-3/4"	4"

standard sizes are:
Custom sizes available on request.



Custom Cast Parts:

As a precision cast urethane supplier Harkness Industries does a number of cast parts. Their specialty are parts requiring precision and exactness.



Harkness in the Industry Leader in working with the Plastics Distribution Industry. Call Harkness your urethane partner with Distribution.

Buy Harkness and receive, The Harkness Quality Advantage !



Let us help you determine which grade of Precision Cast Urethane is best for your application. NOT ALL URETHANES ARE CREATED EQUAL !

MECHANICAL PROPERTY	ASTM Test	MP300	MP600	MP750	MP850	MP900	MP950	MP160	MP175
Tensile Properties									
Break, psi	D-412	380	4500	5500	6000	4500	5500	6500	7500
100% modulus, psi	D-412	80	250	350	600	1100	1800	3000	5500
300% modulus, psi	D-412	170	600	1000	1500	2100	4000	6500	-
Elongation, %	D-412	515	500	500	500	450	320	300	225
Break Set, %	D-412	-	5	10	10	10	10	15	-
Modulus of Elasticity, psi	D-638	-	5	15	25	50	90	125	-
Compression Properties (Shape factor 0.56)									
Deflection, psi @ 5%	D-575	15	30	70	180	310	450	-	-
Deflection, psi @ 10%	D-575	25	70	140	390	625	890	-	-
Deflection, psi @ 15%	D-575	34	110	220	560	875	1170	-	-
Deflection, psi @ 20%	D-575	38	160	280	690	1125	1400	-	-
Deflection, psi @ 25%	D-575	44	220	330	800	1350	1600	-	-
Compression Set, %									
Method A @ 70° C	D-395	-	10	8	5	-	1	10	15
Method B @ 70° C	D-395	9	10	15	25	30	40	50	-
Durometer, Shore ± 5	D-2240	30A	60A	75A	85A	90A	95A	60D	75D
Tear Properties, pli, Die C	D-624	90	200	250	400	400	450	700	850
Abrasion Resistance, Tabor									
H18 @ 1000 gm. load, mg. loss per 1000 cycles	C-501	-	30	40	40	30	40	80	450
Specific Gravity	D-792	1.20	1.26	1.26	1.26	1.10	1.15	1.18	1.18
Base		Ester	Ester	Ester	Ester	Ether	Ether	Ether	Ether

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Profile Extrusion:

Harkness Industries specializes in short runs of custom pipe and profile plastic extrusions. They utilize a variety of engineering grade resins.

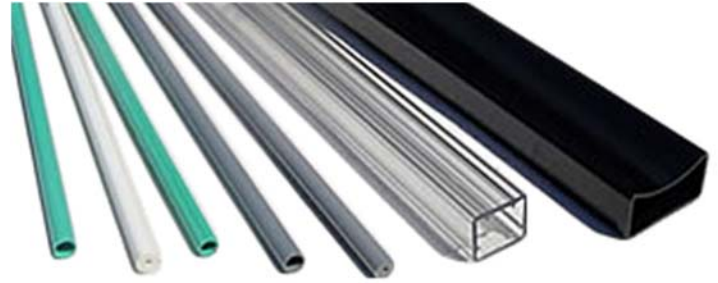
Technical advices, design assistance and secondary manufacturing are just a few of the additional services.

Harkness' profile extrusion unit tailors its operation to meet its customers' requirements, first time-every time.

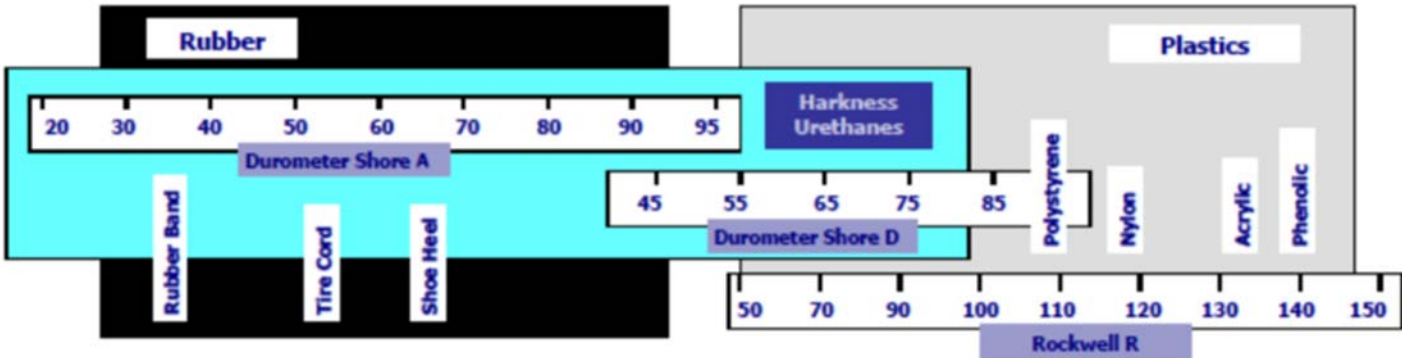
Injection Molding:

Harkness Industries is the Northeast's preeminent injection molder of precision engineering grade plastic components. Harkness provides an extraordinary combination of resources, focused exclusively on meeting the need of the customers that require tight tolerance custom-molded parts.

Harkness offers its customers the advantages of prototyping, engineering and tooling capabilities, including expertise in utilizing in-house cast urethane to create prototypes.



Urethane Product Selector Guide Typical Applications



APPLICATIONS	REPLACES	MP 300	MP 600	MP 750	MP 850	MP 900	MP 950	MP 160	MP 175	Key Physical Properties
Bumper Pads	Rubber	30A	60A	75A	85A	90A	95A	60D	75D	Hardness or Durometer, Shore A & D Resilience, Tear
Cutter Bars	UHMW, Wood		X	X	X	X	X			Tear, Compression/Deflection
Wear Pads	UHMW, Metal				X	X	X		X	Abrasion, Tear, Resilience
Gaskets	Rubber, Cork	X	X	X	X	X	X			Compression Set, Chem. Resistance
Drive/Idler Rollers	UHMW, Rubber		X	X	X				X	Tear, Compression/Deflection
Die Cutting Pads	UHMW, Wood				X	X	X			Tear, Compression/Deflection
Wiper Blades	Rubber		X	X	X	X				Tear, Abrasion, Solvent Resistance
Hydraulic Seals	Rubber					X	X			Oil Resistance, Compression Set
Bushings	Rubber, Metal			X	X	X	X			Abrasion, Tear
Isolation Vibration	Rubber				X	X	X			Resilience, Compression/Deflection
Tires & Wheels	Rubber				X	X	X	X		Heat build-up, Compression Set
Material Handling	UHMW, Metal		X	X	X	X	X			Abrasion, Tear, Resilience

Can't find your end use ... Urethanes are used in hundreds of applications. Call our Design Engineers for an expert recommendation.