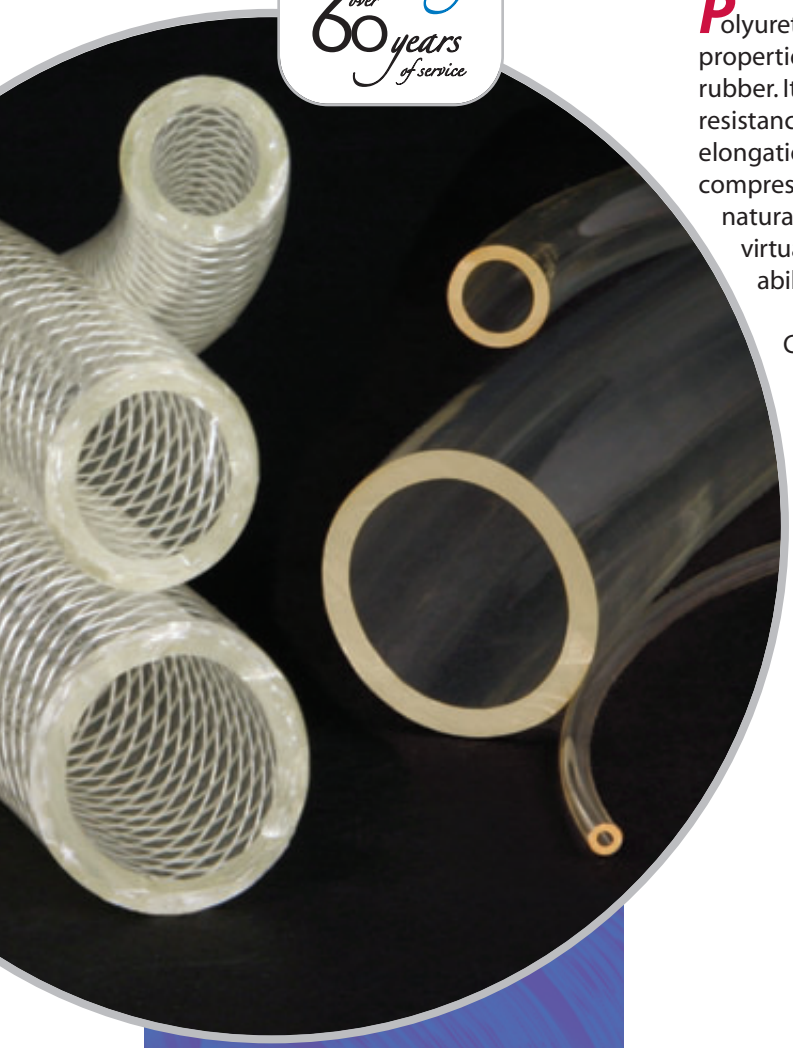
NEWAGE INDUSTRIES

Polyurethane

Celebrating over 60 years of service



Polyurethane combines the best properties of both plastic and rubber. It offers abrasion and tear resistance, high tensile and elongation values, and low compression set. Polyurethane is naturally flexible and exhibits virtually unlimited flexural abilities.

Combining good chemical resistance with excellent weathering characteristics sets polyurethane apart from most other thermoplastics. It has exceptional resistance to most gasolines, oils, kerosene, and other petroleum-based chemicals, making it an ideal choice for fuel lines (although additives in today's gasoline and petroleum products warrant field testing).

The two basic formulations of urethane, ester and ether, have some important differences. Water attacks ester-based urethane, causing a significant reduction in physical properties. Ether urethanes exhibit far superior hydrolytic stability, especially in humid environments. Ether-based materials also resist fungus growth better than ester-based materials. ■

Applications

■ Abrasive Powder Transfer ■ Agriculture ■ Air Tools ■ Automated Machinery ■ Automotive ■ Cement Slurries ■ Computer Disc Drive Equipment ■ Fluid Circuitry ■ Fluid Feeds ■ Granular Transfer ■ Grease & Lubrication Lines ■ Hydraulic Control Systems ■ Instrumentation ■ Insulating Sleeves ■ Lubricated Air Feeds ■ Metering Pumps ■ Oil & Fuel Lines ■ Oxygen & Gas Lines ■ Petroleum Products Transfer ■ Pneumatic Control Systems ■ Pressure Measuring Devices ■ Robotics ■ Sensing Systems ■ Small Motor Fuel Lines ■ Transfer Lines for Clean Liquids ■ Transfer Lines for Internal Contamination Fluids ■ Vacuum Equipment ■ Well Pipe and Cable Jacket ■ More

Fluid Transfer Specialists®

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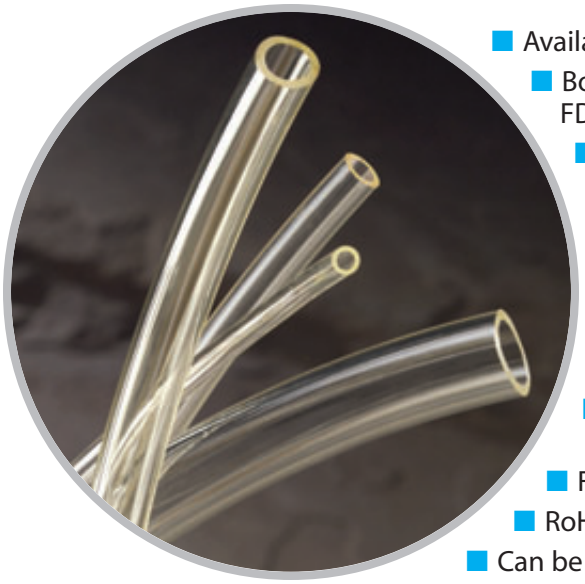
Superthane®

Transparent Polyurethane Tubing



- Available in Ester or Ether formulations
- Both formulations made from non-toxic raw materials conforming to FDA standards for use with wet and fatty food contact surfaces
- Extremely resistant to weathering†, tearing, impact, radiation, and abrasion
- Transparent, flexible, resilient, tough; resistant to oils, greases, and fuels††
- Wide range of temperature resistance: -85°F to 185°F (ester)
- Ether-based raw material is listed by the National Sanitation Foundation (NSF 61) for use with potable water
- Ester-based raw material is free of animal derived components and REACH compliant
- Free of DEHP, phthalates, BPA and conflict minerals
- RoHS compliant
- Can be heat sealed, coiled, fabricated, or bonded

Made in U.S.A.

Notes

†Hydrolytic Stability — For resistance to moisture and fungi, SUPERTHANE ether is recommended. (Ester polyurethane does not react well with water, prolonged humid conditions, or attack from fungi.) The raw material used in its manufacture is listed by the National Sanitation Foundation (NSF 61).

SUPERTHANE is much more resistant to pressure and vacuum applications than corresponding sizes of PVC or rubber.

††Although polyurethane is commonly used in fuel applications, due to additives in today's gasoline and petroleum products, field testing should be performed.

When used with Thermobarb® fittings, SUPERTHANE will not require clamps, provided that working pressures remain at or below 105 psi at ambient temperature.

Custom coiled polyurethane is available — call for details.

For easy identification, SUPERTHANE is imprinted with the trademarked name.

Physical Properties**

	ESTER	ETHER
Hardness, Shore A ±5	85	85
Tensile Strength, psi	6100	7500
Elongation at Break, %	490	500
Brittle Temperature, °F	-85	-85
Maximum Operating Temp., °F	185	175

**Values listed are typical for the material used in manufacture, except where noted, and are meant only as a guide to aid in design. Field testing should be performed to find the actual values for your application.

Custom Services

Cut **Color** **Hot Bond** **Hardness**
Size **Overbraid** **Heat-Form** **And More**

Call for more information: **800-506-3924** *or* **215-526-2300**

Recommended Fittings & Clamps

- Thermobarb® barbed fittings
- Cam operated couplings
- Oetiker® ear type clamps
- Kwik Clamp™ nylon double bond hose clamps
- Worm gear clamps

Meet Some of NewAge Industries' Owners

Through an Employee Stock Ownership Plan (ESOP), we're part owners in the company, and that makes *your* satisfaction an investment in *our* future.

ESOP Employee Owned for Your Benefit

Molly Doheny
Human Resources Manager/Owner
3 years

Randy Decker
Graphic & Web Designer/Owner
21 years

Bunna Soth
Silicone Molding/ Owner
9 years

PART NO. *ESTER*	PART NO. *ETHER*	**ID (IN.)**	OD (IN.)	WALL (IN.)	STANDARD LENGTH (FT.)	WORKING PSI AT 70°F	LBS. PER 100 FT. *ESTER*	LBS. PER 100 FT. *ETHER*
200 0075	210 0070	.063	.125	.031	100	135	.48	.45
	210 0070	.063	.125	.031	500	135		.45
200 0152	210 0147	.125	.188	.031	100	72	.79	.74
200 0152		.125	.188	.031	1000	72	.79	
200 0229	210 0224	.125	.250	.063	100, 1500	130	1.92	1.77
200 0383		.170	.250	.040	500	70	1.37	
200 0460		.188	.250	.031	100	27	1.13	
200 0537	210 0455	.188	.313	.063	100, 1000	74	2.55	2.38
200 0768	210 0609	.250	.313	.031	100	33	1.42	1.33
200 0845	210 0686	.250	.375	.063	100, 1000	67	3.19	2.98
200 0999	210 0840	.250	.500	.125	100	131	7.66	7.15
200 1076	210 0917	.313	.438	.063	100	65	3.83	3.57
200 1153		.313	.500	.094	100	75	6.24	
200 1230		.313	.563	.125	100	118	8.93	
200 1307	210 1148	.375	.500	.063	100	59	4.47	4.17
	210 1148	.375	.500	.063	500	59		4.17
200 1384	210 1225	.375	.563	.094	100	84	7.16	6.68
200 1461	210 1302	.375	.625	.125	100	100	10.22	9.54
200 1615		.438	.688	.125	100	80	11.48	
	210 1533	.500	.625	.063	50	36		5.36
200 1692	210 1533	.500	.625	.063	100	36	5.75	5.36
	210 1610	.500	.688	.094	100	48		8.47
200 1846	210 1687	.500	.750	.125	50, 100	60	12.77	11.92
	210 1764	.625	.750	.063	100	40		6.56
200 2000	210 1841	.625	.813	.094	100	54	10.98	10.25
200 2077	210 1918	.625	.875	.125	100	60	15.33	14.30
	210 1995	.750	.938	.094	100	43		12.03
200 2231	210 2072	.750	1.000	.125	50, 100	51	17.88	16.69
200 2385	210 2226	.875	1.125	.125	100	33	20.43	19.07
	210 2380	1.000	1.250	.125	50	40		21.46
200 2539	210 2380	1.000	1.250	.125	100	40	22.99	21.46
	210 2534	1.500	1.750	.125	100	31		30.99
	210 2688	2.000	2.250	.125	50	22		40.53

Add length suffix to part number when ordering. Example: 100 ft. of .125" I.D. x .188" O.D. ester tubing is part number 200 0152-100.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Cut coils are available from coils of 100 ft. or less; charges apply — call for details. Coils over 100 ft. are sold by standard coil length only. Due to the coil diameter, some larger sizes must ship via truck.
Tolerances: ID & OD ±3% but not less than ±.005".
BOLD indicates the critical dimension for fittings application.

More NewAge Industries' Owners

www.newageindustries.com

Did you know . . . ?

We successfully undergo **multiple customer audits** each year.

ESOP Employee Owned for Your Benefit

Chris Boytim
Supplier Quality Manager/ Owner
18 years

Nary Seng
Silicone Molding/ Owner
7 years

Jeremiah Brookins
Warehouse/Owner
1 year

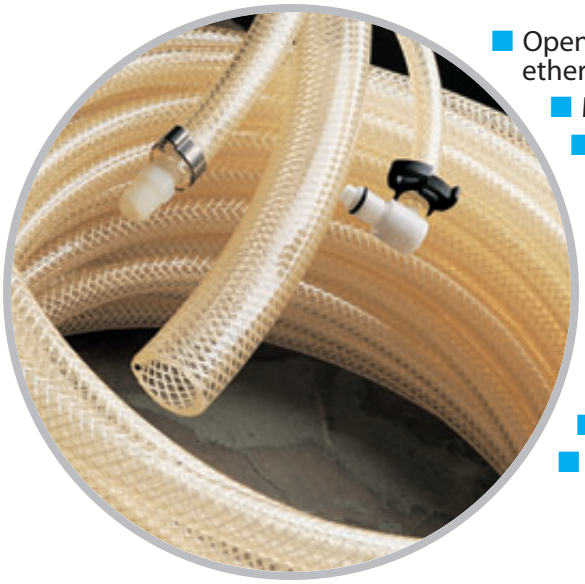
Peter Chao
Silicone Manufacturing/Owner
16 years

Kathy Colon
Silicone Molding/ Owner
4 years

Dan Tropea
Director of Supply Chain/Owner
1 year

Urebrade®

Transparent Braid Reinforced Polyurethane Hose



- Open mesh polyester braiding incorporated within the wall of flexible, ether-based polyurethane
- Made from non-toxic raw ingredients conforming to FDA standards
- Raw materials are listed by the National Sanitation Foundation (NSF 61) for use with potable water
- Offers much greater pressure capability than unreinforced polyurethane tubing
- Resistant to weathering†, tearing, impact, abrasion, radiation exposure, oils, greases, and fuels††
- Wide range of temperature resistance; -90°F to 175°F
- Free of DEHP, phthalates, BPA and conflict minerals
- RoHS compliant
- Naturally transparent for visual contact with the flow

Made in U.S.A.

PART NO.	**ID (IN.)**	OD (IN.)	WALL (IN.)	STANDARD LENGTH (FT.)	WORKING PSI AT 70°F	BEND RADIUS (IN.)	LBS. PER 100 FT.
220 0072	.250	.470	.110	50, 100	250	.750	6.04
220 0149	.375	.630	.127	50, 100	190	.750	9.78
220 0226	.500	.750	.125	25, 50, 100	150	1.500	11.92
220 0303	.625	.905	.140	100	130	2.000	16.34
220 0380	.750	1.025	.137	50, 100	100	3.000	18.62
220 0457	1.000	1.300	.150	25, 50, 100	80	3.500	26.32
220 0534	1.250	1.710	.230	50, 100	75	4.000	51.94
220 0611	1.500	1.930	.215	50, 100	50	5.500	56.26
220 0688	2.000	2.500	.250	100	40	7.500	85.82

Add length suffix to part number when ordering. Example: 100 ft. of .250" I.D. x .470" O.D. hose is part number 220 0072-100.
Working pressures are calculated from burst testing using a 4:1 safety factor. Application testing is recommended.
Cut coils available; charges apply — call for details.
Due to the coil diameter, some larger sizes must ship via truck.
BOLD indicates the critical dimension for fittings application.

Notes

†Hydrolytic Stability — UREBRADE is supplied in an ether formulation, making it resistant to attack from moisture and fungi. The raw materials used in UREBRADE are listed by the National Sanitation Foundation (NSF 61).

Where applications involve repeated flexing, heavy vibration, or abrasion, UREBRADE offers superior service life over other materials.

Ester-based UREBRADE is available through minimum order — call for details.

††Due to additives in today's gasoline and petroleum products, field testing should be performed.

For easy identification, transparent UREBRADE is imprinted with the trademarked name.

Physical Properties**

Hardness, Shore A ±5	85
Tensile Strength, psi	5500
Elongation at Break, %	580
Brittle Temperature, °F	-90
Max. Operating Temperature, °F	175

**Values listed are typical for the material used in manufacture, except where noted, and are meant only as a guide to aid in design. Field testing should be performed to find the actual values for your application.

Custom Services

Cut **Color** **Hot Bond**
Size **Overbraid** **Heat-Form** **And More**

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- Oetiker® ear type clamps
- Kwik Clamp™ nylon double bond hose clamps
- Worm gear clamps

DISTRIBUTOR PARTNER

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