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 & Lawn Equipment
- Air Tools
- Automated Machinery
- Automotive Fluids
- Cement Slurries
- Computer Disc Drive Equipment
- Fluid Circuity
- 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

Superthane®
- Transparent polyurethane tubing ................................2

Urebrade®
- Transparent braid reinforced polyurethane hose ..............4

Fluid Transfer Specialists®

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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 resin 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

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 resin 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.
- Custom coiled polyurethane is available — call for details.
- For easy identification, SUPERTHANE is imprinted with the trademarked name.

Physical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>ESTER</th>
<th>ETHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness, Shore A ±5</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Tensile Strength, psi</td>
<td>6100</td>
<td>7500</td>
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<tr>
<td>Elongation at Break, %</td>
<td>490</td>
<td>500</td>
</tr>
<tr>
<td>Brittle Temperature, °F</td>
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<td>-85</td>
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<tr>
<td>Maximum Operating Temp., °F</td>
<td>185</td>
<td>175</td>
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</table>

**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.

Recommended Fittings & Clamps

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

Custom Services

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

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

ESOP Employee Owned for Your Benefit

Did you know . . . ?

Through an Employee Stock Ownership Plan (ESOP), NewAge’s team members are owners of the company, and that makes your satisfaction an investment in our future.
# Transparent Polyurethane Tubing

**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.

CF = Consult factory

*Limited stock availability; lead times and minimums may apply — call for details.

**Cutting Tools Available!**

Standard (pictured): part no. 980 0000
Mini: part no. 980 0049

---

**PART NO.**

**ESTER**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>ID (IN.)</th>
<th>OD (IN.)</th>
<th>WALL (IN.)</th>
<th>STANDARD LENGTH (FT.)</th>
<th>WORKING PSI AT 70°F</th>
<th>LBS. PER 100 FT. ESTER</th>
<th>LBS. PER 100 FT. ETHER</th>
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<td>.45</td>
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<td>65</td>
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<td>0.125</td>
<td>50</td>
<td>22</td>
<td>40.53</td>
<td></td>
</tr>
</tbody>
</table>

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.

Cutting Tools Available!

Standard (pictured): part no. 980 0000
Mini: part no. 980 0049

---

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We successfully undergo multiple customer audits each year.

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NewAge Industries are deemed defective. NewAge Industries specifically disclaims any other liability. The data supplied is provided as a guide to aid in design. Field testing should be performed to find the actual values for your application.

**WARRANTY:** NewAge Industries' products are warranted to be free from defects in material and workmanship. Any product...be reliable; however, nothing stated shall constitute a guarantee, recommendation, or warranty for any application.

**Physical Properties**

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

**Notes**

- **Hydrolytic Stability — UREBRADE** is supplied in an ether formulation, making it resistant to attack from moisture and fungi. The resin used in UREBRADE is 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.

**Recommended Fittings & Clamps**

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

**Custom Services**

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

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

**Cutting Tools Available!**

Standard (pictured): part no. 980 0000
Mini: part no. 980 0049

---

**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.

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.