

Technical Bulletin

The Exceptional Properties of Garlock Urethane 9220 GARTHANE® U-Seals

Strength/Durability

- ◆ Four times the tensile strength/tear resistance of conventional seals
- ◆ High modulus counteracts extrusion and shear forces
- ◆ Withstands shocks over a wide range of temperatures and pressures
- ◆ Exceptional abrasion resistance
- ◆ Outstanding endurance under difficult operating conditions

Flexibility

- ◆ Exhibits excellent elasticity
- ◆ Exhibits excellent resilience
- ◆ Withstands high degree of deformation
- ◆ Can be bent, stretched, squeezed or folded to aid in installation

Chemical Resistance

- ◆ Excellent for use against petroleum-based fluids, oil, air, warm water and water glycol.
- ◆ Will also withstand dilute acetic and alkaline solutions, aliphatic alcohols and hydrocarbons, salts and solutions of aromatics and solids in concentrations under 80%.

Temperature & Pressure Resistance

Garlock Urethane Seals are compounded to withstand a wide range of temperature and pressure conditions. Consult our individual brochures, your local authorized Garlock distributor, Garlock sales representative, or the factory for the Garlock seal best suited to your application.

Features

<u>Features</u>	<u>Advantages</u>
90 Durometer Urethane	<ul style="list-style-type: none"> ◆ High tensile strength ◆ High tear resistance
Reverse Bevel Lip Design	<ul style="list-style-type: none"> ◆ Less friction ◆ Responses immediately to pressure
Balanced Design	<ul style="list-style-type: none"> ◆ Ability to function as either a rod or piston seal
Clear Urethane Composition	<ul style="list-style-type: none"> ◆ No hidden defects in seal
Knife Trim Lips	<ul style="list-style-type: none"> ◆ Uniform lip contact / no flash

Benefits:

- ◆ Increased seal life and performance
- ◆ Fewer sizes save inventory expense
- ◆ Less equipment downtime
- ◆ Eliminates chance of costly premature equipment failure

Recommended Tolerances and Finishes

- Shaft Chamfer: None required for normal installation
- Shaft Hardness: 30 Rockwell C (minimum)
- Groove Length (axial): Height of U-Seal plus 10% of cross-section (.032" minimum)
- Dynamic Surface Finish: 20 RMS (maximum)
- Tolerance: +/- .003" (maximum)
- Static Surface Finish: 60 RMS (maximum)
- Tolerance: +/- .005" (maximum)
- Counterbore Chamfer: 1/16" x 45°