

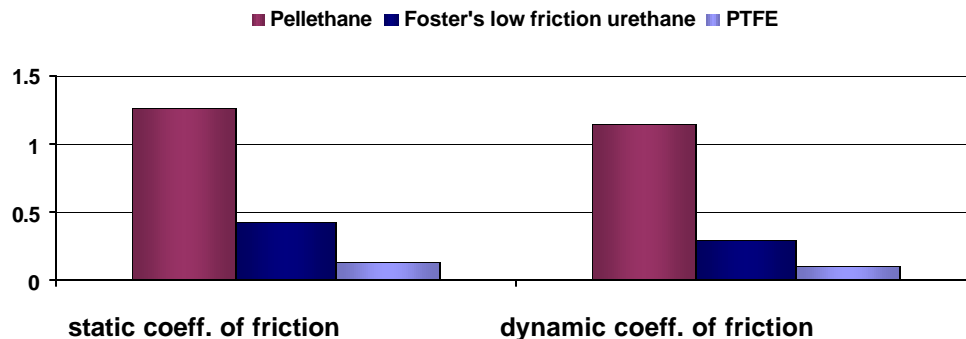


## SEP™ LOW FRICTION POLYURETHANE

Selectively enhanced polymers represent the latest in materials technology whereby selected properties are improved without detrimental trade-offs in other key properties. Foster's new SEP™ low friction urethanes combine low friction properties with the unique flexibility and mechanical properties of urethanes. Low friction properties are often required to enhance the function of mating components, including tubing assemblies, seals, and much more.

Traditionally, increased lubricity through internally compounded additives, such as PTFE, adversely impacted critical mechanical properties of urethanes and restricted the part design. The alternative was an external lubricant that would diminish with time and use, and hindered adhesive bonding required in many applications. Foster's SEP™ low friction urethanes use a unique internal lubrication system that maintains the flexibility and mechanical benefits of the base urethane while enhancing frictional properties to levels approaching PTFE. Additionally, this lubrication system has no adverse effect on adhesion.

Compounds can be developed in compliance with USP Class VI requirement and European Blue Angel standards.



### FEATURES

- Low coefficient of friction
- Flexible
- Excellent tensile strength
- High elongation
- Excellent adhesive bonding
- Low tackiness/sticking
- Improved processing parameters

### BENEFITS

- Enhances mating of multiple components
- Eliminates external lubricants
- Permanent lubrication
- Compatible with adhesives for assembly
- No sacrifice in performance
- Increases design freedom

### **APPLICATIONS: TUBING, SEALS, GEARS, BUSHINGS, FILM AND MORE.**

For more information on these and other advanced polymer compounds, please contact Foster Corporation, a leader in specialty materials for leading edge industries.

### **FOSTER CORPORATION**

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# TYPICAL PROPERTIES

## FOSTER'S SEP™ LOW FRICTION POLYURETHANE (Medical Grade for Injection Molding and Extrusion)

PROPERTIES		TEST METHOD	FOSTER SEP™ URETHANE	NATURAL POLYURETHANE
Friction Coefficient,	Static	ASTM D 1894-90	<b>0.42</b>	1.26
	Dynamic		<b>0.30</b>	1.14
Hardness, Durometer,	A Scale	ASTM D 2240-91	<b>89</b>	89
Specific Gravity		ASTM D 792-91	<b>1.13</b>	1.13
Melt Index, gm/10 min	(224°C, 1200 g)	ASTM D 1238-91	<b>20</b>	20
Tensile Stress, psi @	50% Elongation	ASTM D 638-91	<b>1,569</b>	1,449
	100% Elongation		<b>2,252</b>	2,075
Ultimate Tensile Stress, psi		ASTM D 638-91	<b>2,908</b>	3,008
Ultimate Elongation, %		ASTM D 638-91	<b>206</b>	240
Tensile Yield Stress, psi		ASTM D 638-91	<b>3,210</b>	3,115
Tensile Modulus, psi		ASTM D 638-91	<b>3,787</b>	3,380

(Note: The above listed properties are typical values and should not be used as specification values)

## GENERAL PROCESSING INFORMATION

Injection Molding Temperature, °F	380 - 410
Extrusion Temperature, °F	380 - 410

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