

E1244-70

USP Class VI and USP <87>
Internally Lubricated EPDM



Reduces Friction:

Parker compound E1244-70 contains an internal lubricant that reduces installation force and dynamic friction without the need for an external lubricant. The proprietary internal lubricant in E1244-70 is derived from the fatty acid family, making it unlikely to cause a patient reaction. Successfully completing USP Class VI and USP <87> testing further demonstrates the safety of this internal lubricant.

External lubricants are messy and migrate into areas where they are not needed, possibly into flow paths where they can affect patient health. Even “clean” lubricants like USP grade silicone quickly trap dirt and dust that can harbor bacteria.



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Benefits:

- No external lubricant required
- Excellent resistance to repeated steam, gamma, ozone, and ethylene oxide sterilization
- Compliant with USP Class VI biocompatibility standards
- Compliant with USP <87> cytotoxicity standards
- Low compression set
- Low friction/low wear
- Temperature range -65 to +250°F
- Compatible with all water-soluble chemistries



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E1244-70 Test Report		
Original Physical Properties	2-129 O-ring results	2-211 O-ring results
Hardness, Shore A, pts	65	70
Tensile strength, psi	2035	1725
Ultimate elongation, %	275	252
Modulus at 100% elongation, psi	351	NT
Specific gravity	1.06	NT
Heat Aging, 70 hrs. @ 125°C, ASTM D573		
Hardness change, pts	+4	NT
Tensile change, %	+22	NT
Elongation change, %	+12	NT
Heat Aging, 70 hrs. @ 100° C, ASTM D573		
Hardness change, pts	NT	+2
Tensile change, %	NT	-7
Elongation change, %	NT	0
Permanent Compression Set, %, ASTM D395 Method B		
70 hrs. at 100°C	8	9
70 hrs. at 125°C	15	NT
70 hrs. at 150°C	13	NT
Fluid Resistance, Distilled Water (168 hrs. at 100°C) ASTM D471		
Hardness change, pts	NT	+2
Volume change, %	NT	0

NT = not tested

E1244-70

In medical devices and pharmaceutical manufacturing applications that involve dynamic motion on rubber seals, small amounts of external lubricants are commonly used to control the friction. Operating seals in a dry condition leads to friction, heat buildup, and accelerated wear that can generate rubber particle contamination or result in leakage.

In addition, many applications require lubrication for installation to prevent seal damage. Installing seals without lubrication can also result in improper assembly, operator fatigue, and repetitive stress injuries.

USP Systemic Toxicity Study		
	Test Group	Control Group
Extract	# Deaths / # Tested	# Deaths / # Tested
Saline	0 / 5	0 / 5
Alcohol in saline	0 / 5	0 / 5
Polyethylene glycol 400	0 / 5	0 / 5
Sesame oil	0 / 5	0 / 5

USP Intracutaneous Study			
Extract	Average test score	Control test score	Difference
Saline	0.0	0.0	0.0
Alcohol in saline	0.0	0.0	0.0
Polyethylene glycol 400	0.0	0.0	0.0
Sesame oil	0.3	0.3	0.0

Cytotoxicity Study Using the USP Elution Method (1x MEM Extract)					
Well	Percent Rounding	% Cells without intracytoplasmic granules	% Lysis	Grade	Reactivity
Test (1A)	0	0	0	0	none
Test (1B)	0	0	0	0	none
Test (1C)	0	0	0	0	none

Note: Control results are on file and available upon request.

Recommended for:

- Dynamic applications
- Surgical instruments
- Pharmaceutical manufacturing
- Biopharmaceutical processing
- Disposable medical devices
- Repeated device sterilization
- Difficult installations

