

E1549-70 Compound for Potable Water Applications

No. 5731-USA

EPDM Sealing Material Certified to NSF 61, WRAS and KTW Standards

Description

Parker's E1549-70, an Ethylene Propylene (EPDM) sealing compound with a Shore A hardness of 70, is certified by the National Sanitation Foundation to meet the stringent requirements of the NSF 61 standard. This standard controls and minimizes the leaching and migration of rubber, plastic or metal materials into end-point devices and all components contained within the final liter of a water distribution system.

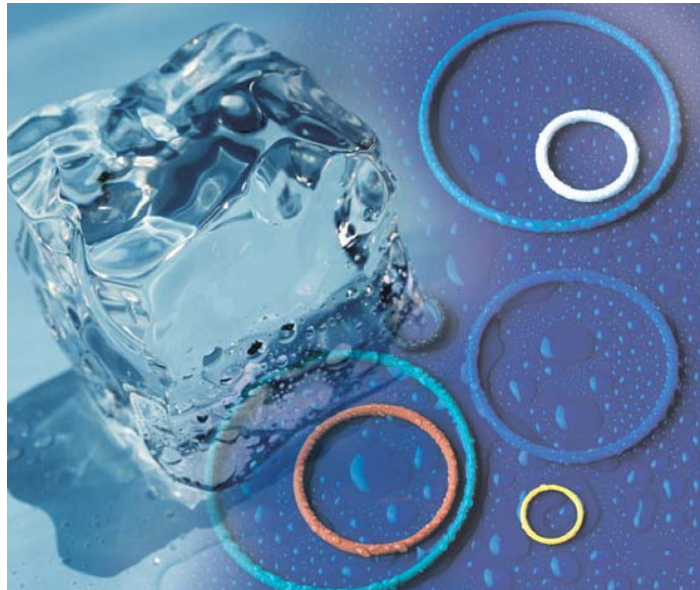
In addition to NSF 61, E1549-70 is also certified to other similar standards set by the United Kingdom's Water Regulations Advisory Scheme (WRAS) and Germany's Kunststoffe und Trinkwasser (KTW).

Typical Applications

E1549-70's superior compression set resistance, coupled with its ability to resist water treatment chemicals, makes it an ideal solution for high-volume sealing requirements in both hot and cold water applications. These include faucets, showerheads, aerators, water filtration components, irrigation systems, ice makers, water meters, valves, fittings and many others.

Features and Benefits of E1549-70

- An EPDM base polymer provides improved long-term service over nitriles in hot water applications
- Provides superior compression set resistance over other ethylene propylene compounds
- International certification (NSF 61, WRAS, KTW) allows for specification of one material for many different industries
- State-of-the-art manufacturing processes translate to greater high-volume cost efficiencies



Test Report E1549-70	ASTM * Spec.	Test Results
Original physical properties, ASTM D2240, D412		
Hardness, Shore A, pts.	70 +/-5	70
Tensile strength, MPa, min.	14	14.9
Modulus @ 100% elongation, MPa, min.	2	2.6
Elongation, %, min.	200	336
Heat aged 70 hrs @ 150°C, ASTM D573		
Hardness change, pts., max.	+10	+3
Tensile change, strength, %, max.	-20	+2
Elongation change, %, max.	-20	-10
Compression set 22 hrs @ 150°C, ASTM D395 Method B		
% of original deflection, (1/2" buttons), max.	25	14
% of original deflection, (plied slabs), max.	25	22
Aging in distilled water 70 hrs @ 100°C, ASTM D471		
Hardness change, pts.	-5 to +5	-2
Tensile change, strength, %, max.	-25	+2
Elongation change, %, max.	-25	0
Volume change, %	-5 to +5	+2
Tear strength, ASTM D624		
Die B (kN/m) min.	17	32
Die C (kN/m) min.	17	37
Low temperature brittleness		
Non-brittle after 3 min. @ -55°C, ASTM D2137	pass	pass
TR-10 (°C), min., ASTM D1329	-40	-42
BS 6920 (WRAS approved)		
	yes	yes
NSF 61 certified		
	yes	yes
KTW approved		
	yes	yes

*Tests are performed on ASTM type specimens, values may be different for other types of specimens.

Parker NSF 61 Materials

In addition to E1549-70, Parker has developed a wide selection of other NSF 61-certified materials. Newer formulations include:

- E1561-60, a 60 durometer EPDM
- E1583-70, an internally-lubricated 70 durometer EPDM
- N1510-70, a 70 durometer nitrile



Refer to the table below for a complete listing of Parker materials certified to NSF Standard 61.

Parker Compound	Polymer	Hardness	Water Contact Temperature*	Service
E1583-70 (63017)	EPDM	70	Commercial Hot **	NSF 61, internally lubricated, ideal for high volume applications
E1561-60 (63446)	EPDM	60	Commercial Hot **	NSF 61, WRAS, KTW, ideal for high volume applications
E1549-70 (63447)	EPDM	70	Commercial Hot **	NSF 61, WRAS, KTW, excellent compression set resistance, ideal for high volume applications
E1570-70	EPDM	70	Commercial Hot **	NSF 61, internally lubricated
E1571-70	EPDM	70	Commercial Hot **	NSF 61
E1244-70	EPDM	70	Commercial Hot **	NSF 61, internally lubricated
E1257-70	EPDM	70	Commercial Hot **	NSF 61, Chloramine resistant
E3609-70	EPDM	70	Commercial Hot **	NSF 61, WRAS, KTW, excellent compression set resistance
EJ151-80 (3958)	EPDM	80	Commercial Hot **	NSF 61, WRAS, KTW
N1517-70	Nitrile	70	Commercial Hot **	NSF 61
N1510-70 (67997)	Nitrile	70	Commercial Hot **	NSF 61, ideal for high volume applications
N0757-70	Nitrile	70	Cold Water ***	NSF 61

* NSF 61 listed materials given a commercial hot water rating are also certified for cold water
 ** Commercial hot = tested at 82° C (180° F) (commercial hot)
 *** Cold water = tested at 23° C (73.4° F)
 Note: Numbers in parenthesis denote former Wynn's Precision compounds
New Parker compounds are listed in red.



Parker Advantages and Benefits:

- Worldwide material approvals eliminate need for multiple materials for the same application
- Ongoing material development for prompt response to industry changes
- In-house production and prototype tooling capabilities for quick turnaround
- Total batch control and traceability of O-rings
- In-house compound mixing assures consistent material properties
- Local logistical support
- Field sales and applications assistance worldwide
- Finite Element Analysis (FEA)
- Total sealing product solutions



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