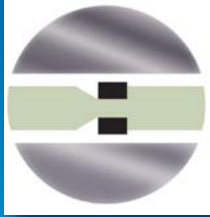
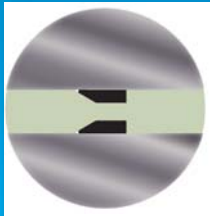


LineBacker® 61™ NSF Certified Sealing and Isolating Gasket



Before Tightening

The sealing elements extend slightly above the surface of the retainer. As the flange is tightened the sealing elements are compressed and move sideways into the inclined portion of the groove, developing a high unit pressure against the flange faces.



After Tightening

The flange faces have come into firm contact with the retainer, thus encapsulating the sealing elements within grooves. At the same time, the unique LineBacker seal configuration provides elastic memory for elastomers not normally associated with this characteristic - resulting in a simple flat gasket with extremely high loading and self energizing characteristics without adverse cold flow problems.

For Potable Water

LineBacker® sealing gaskets utilize a rectangular sealing element, referred to as a “quad” ring, in combination with a unique groove design to effectively seal and isolate flanges for all types of applications. Used and proven, for over 40 years, in the water and energy industry’s - LineBacker® gaskets have been effectively sealing flanges within piping systems carrying potable water and other materials in high/low temperature extremes even at high pressure ratings.

Of particular importance with respect to NSF/ANSI Standard 61, is the micro-exposure of the sealing element (EPDM) within the G-10 Epoxy Glass retainer material. In addition to providing positive sealing characteristics relative to the fluid flowing within the pipe, the seal element is also protected from deterioration by atmospheric conditions which dramatically lengthens the service life of the gasket.

NSF/ANSI Standard 61 establishes minimum health effect requirements for the chemical contaminants and impurities that may be indirectly imparted to drinking water.

The LinkBacker® 61™ Sealing/Isolating gasket meets all criteria associated with NSF health effects testing, certification and production facility inspections. PSI confirms that NSF has assessed and certified the LineBacker® 61™ as conforming with the relevant NSF standards. For more information regarding NSF, visit www.nsf.org.



Common LineBacker® 61™ Sealing Gasket Physical Properties - Retainer

ASTM	Test Method	G-10 Epoxy Glass
D149	Dielectric Strength	
	Volts/Mil (Short Time)	550
D695	Compressive Strength (psi)	50,000
D229	Water Absorption (%)	0.10
D257	Insulation Resistance	
	Meg Ohms	200,000
D790	Flexural Strength (psi)	60,000
D785	Hardness Rockwell “M”	115
D256	IZOD Impact Strength	
	(Ft-Lbs/Inch)	14.0
D638	Tensile Strength (psi)	45,000
D732	Shear Strength (psi)	22,000
	Temperature Range	Cryogenic to +280°F. Cryogenic to +138°C.
Seal Element Temperature Range		EPDM
	Temperature Range (F.)	-65 to +300°F.
	Temperature Range (C.)	-54 to +149°C.



NSF 61 Certified



Potable Water Flange Isolation Kit

PSI suggested washer and sleeve material to complement your NSF 61 Flange Kit Application. For more sleeve and washer combinations, please review our published Flange Isolation catalog or visit www.pipelineseal.com.

G-10 1 PC Sleeve and Washer Sets

One-piece sleeve and washer sets include the following items for each bolt:

- One - 1/8" thick steel washer
- One - 1/8" thick G-10 Washer
- One - G-10 Isolating Sleeve

Application Considerations

Completely assembled, easier to install, 1 PC sleeves also allow the inspector a visual indication of sleeve usage.



Sleeve Material Physical Properties

ASTM Test Method	G-10 Epoxy Glass
D149 Dielectric Strength Volts/Mil (Short Time)	400
D695 Compressive Strength (psi)	N/A
D229 Water Absorption (%)	0.10
D790 Flexural Strength (psi)	55,000
Cut Through Resistance (ft.-lbs.)	16,000
Operating Temp. (°F)	Cryogenic to +280
Operating Temp. (°C)	Cryogenic to +138

1/8" Washer Material Physical Properties

ASTM Test Method	G-10 Epoxy Glass
D149 Dielectric Strength Volts/Mil (Short Time)	550
D695 Compressive Strength (psi)	50,000
D229 Water Absorption (%)	0.10
Operating Temp (°F)	Cryogenic to +280
Operating Temp (°C)	Cryogenic to +138

NSF 61 Flange Isolation Kit Specification

Materials for flange isolation kits on pipes containing drinking/potable water (up to 280°F, 138°C) shall consist of the following components:

Isolating and Sealing Gasket

The full faced, NSF 61 certified, isolating and sealing gasket shall be LineBacker® 61™ Sealing Gasket (LB61) - Type "E", 1/8" thick, G-10 retainer containing a precision tapered groove to accommodate the controlled compression of a EPDM quad-ring sealing element. Sealing element placement shall accommodate either flat, raised face or RTJ flanges. The quad-ring seal shall be pressure energized. The G-10 retainer shall have a 550 volts/mil dielectric strength and a minimum 50,000 psi compressive strength. The full faced flange isolating gasket (weld-neck) shall be equal to or slightly smaller than the bore of the flange; (slip-on) shall be equal to or smaller than the I.D. of mating pipe.

Full Length Bolt Isolating Sleeves

One full length G-10 sleeve (extending half way into both steel washers) for each flange bolt. The G-10 shall be a 1/32 inch thick tube with a 400 volts/mil dielectric strength and water absorption of 0.10% or less.

Washers

Two, 1/8 inch thick, G-10 isolating washers for each bolt. Their compressive strength shall be 50,000 psi, dielectric strength 550 volts/mil and water absorption 0.10% or less. Two, 1/8 inch thick zinc plated, hot rolled steel washers for each bolt. The I.D. of all washers shall fit over the isolating sleeve and both the steel and isolating washers shall have a same I.D. and O.D.

Quality (Made in U.S.A - A.R.R.A Complaint)

Flange isolating kits shall be manufactured at a facility that has a registered ISO 9001:2008 Quality Management System. Submittals shall include copy of valid ISO registration and NSF 61 certification.

Availability

Kits shall be manufactured by PSI-Pipeline Seal and Insulator, Inc., Houston, Texas, U.S.A. Alternate products should be submitted to an engineer 10 days prior to bid due date.

Telephone: 713-747-6948 • Facsimile: 713-747-6029
www.pipelineseal.com • e-mail: info@psipsi.com.

Performance suitability and material compatibility shall be determined by the user.



Pipeline Seal and Insulator, Inc.

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 Telephone: 713-747-6948 • Facsimile: 713-747-6029
 Toll Free: 800-423-2410 • e-mail: info@psipsi.com
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