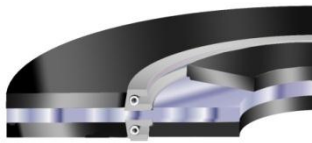




DEFENDER Submittal Information

The Defender™ sealing/isolating gasket system is designed for critical/extreme applications.



Manufactured with a 316 stainless steel core retainer and laminated on both sides with high strength laminates, the Defender™ gasket is resistant to deforming under load and is used when electrical isolation and corrosion control are required on pipes containing gas, natural gas, oil and other hydrocarbon based medias up to 392°F (200°C). Available for flat face, raised face and ring type joint flanges from 1/2" to 36", ANSI 150-2500# and API 2-10K, the Defender™ gasket is an engineered solution for trouble-free

operation that eliminates costly leaks and provides a solution for fugitive emissions.

Manufactured with an innovative industry first Press-n-Lock™ "Glue-Less Seal & Groove Technology" that combines a press-in, pressure activated and spring energized seal with a unique groove that retains the seal element without the use of glue on key contact surfaces! The Press-n-Lock feature provides a higher confidence in sealing.

Sealing/Isolating Steel Core Gasket

One isolating and sealing gasket, DEFENDER™ Type "F" (Fits within bolt holes) 0.250" thick, 316 stainless steel core retainer laminated on both sides with a G10 fiberglass reinforced laminate (G10S). Containing a precision tapered groove to accommodate PTFE (Teflon®) controlled compression, and spring energized seal. Sealing element placement shall accommodate either flat, raised or RTJ face flanges. The G10 retainer shall have 750-800 volts/mil dielectric strength and a minimum 65,000 psi compressive strength. The I.D. of the flange isolating gasket shall match the bore of the flange in which it is installed.

RETAINER MATERIALS (G10S)

- 1/4" (0.250") total thickness
- Metal Core 0.120" thick = 316SS
- Laminate 0.065" per side

GASKET/RETAINER MATERIAL SPECIFICATIONS

| ASTM | TEST METHOD | G10S |
|-------------|---|---|
| D149 | Dielectric Strength Volts/Mil Short Time | 750-800 |
| D695 | Compressive Strength (psi) | 65,000 |
| D570 | Water Absorption (%) | 0.05 |
| D790 | Flexural Strength (psi) | 65,000 |
| D256 | IZOD Impact Strength (Ft- lbs/Inch) | 14.0 |
| D638 | Tensile Strength (psi) | 50,000 |
| D732 | Bond Strength (lb) | 2,600 |
| | Temperature - Operating | Cryogenic -238°F (-150°C) to +302°F (+150°C) |

NOTE: Operating Temperature for Gaskets and Flange Isolation Kits is based off the Gasket Retainer Temperature. Seal element temperature does not dictate the Min. and Max. gasket operating temperature.

SEAL ELEMENT MATERIALS

- PTFE (Teflon®) Spring Energized. Spring is Stainless Steel

SEAL ELEMENT MATERIAL SPECIFICATIONS

| Sealing Element | Temperature - Operating |
|------------------------|--------------------------------|
| Teflon® | Cryogenic to +525°F (+274°C) |

SLEEVE WASHER MATERIAL SPECIFICATIONS

SD = Standard

G10 Sleeves, Steel ZP Washers and G10 Washers (Double Washer Set).

Full Length Sleeves – For Isolating Bolts

A full length G10 sleeve with a wall thickness of 1/32” (0.79mm) passing through both steel washers for each bolt/stud.

The G10 sleeve shall have a dielectric strength of 750 volts/mil and water absorption of 0.05%.

| ASTM | Test Method | G10 |
|-------------|--|------------------------------|
| D149 | Dielectric Strength, Volts/Mil. Short Time | 750-800 |
| D570 | Water Absorption (%) | 0.50 |
| D790 | Flexural Strength (psi) | 65,000 |
| | Cut Through Resistance | High |
| | Temperature - Operating | Cryogenic to +302°F (+150°C) |

Washers – Double Set

Two 1/8” (3.2mm) thick G10 isolating washers for each bolt/stud. Compressive strength shall be 65,000 psi – dielectric strength of 750 volts/mil – water absorption of 0.05%.

Two zinc plated (ZP) washers are needed for each bolt/stud. Isolating and steel washers shall have the same O.D. and I.D. and fit over the full length sleeve.

| ASTM | Test Method | G10 |
|-------------|--|------------------------------|
| D695 | Compressive Strength (psi) | 65,000 |
| D149 | Dielectric Strength, Volts/Mil. Short Time | 750-800 |
| D570 | Water Absorption (%) | 0.05 |
| | Temperature - Operating | Cryogenic to +302°F (+150°C) |

For further details on this product line please contact gav@albagaskets.co.uk

