

ISOMATE™

Sealing/Isolating Gaskets and Flange Isolation Kits



The ISOMATE™ sealing/isolating gasket is designed for basic applications where electrical flange isolation and corrosion control are required on pipes containing water/wastewater, gas, natural gas, oil and other hydrocarbon based medias up to 175°F(79°C). Available for flat face and raised face joint flanges from 1/2" to 24", ANSI 150-300#, PN 20-50, the ISOMATE™ gasket is an economical solution for basic performance. The ISOMATE™ sealing/isolating gasket consists of a phenolic retainer faced on both sides with nitrile rubber material.

Features

- Sealing and Isolating Gasket
- Type E or F Gaskets

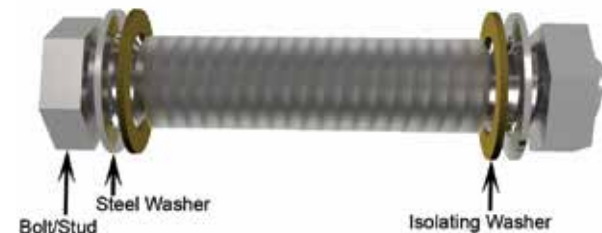
Applications

ISOMATE™ gaskets are designed to provide reliable sealing and electrical isolation for a wide variety of basic applications.

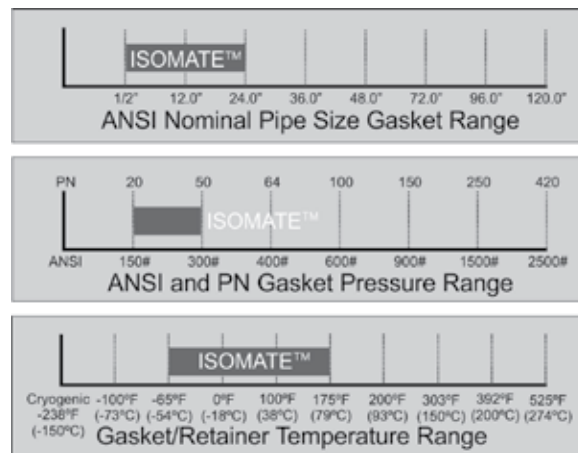
The industry has improved sealing technology in retainer type gaskets with engineered seal elements and groove designs. DEFENDER™ and ISOGUARD™ sealing systems should be reviewed, specified and used when a long-term maintenance-free solution is necessary.



Rubber faced flat gaskets have limitations, use Packaged ED sleeve and washer sets. If the application borders on technical limitations consider ISOGUARD™ G10 Flange Isolation Kits with packaged sleeve/washer set SD.



ED = Economy (Mylar Sleeves, Steel ZP Washers and Phenolic Washers) - Double Washer Set.



For applications outside ranges shown, consult factory.

Retainer Materials

- Phenolic
- Retainer Thickness 1/8" (0.125") (3.18mm)

Gasket/Retainer Material Specifications

ASTM	TEST METHOD	Rubber Faced Phenolic
D149	Dielectric Strength Volts/Mil Short Time	500
D695	Compressive Strength (psi)	25,000
D570	Water Absorption (%)	1.60
D790	Flexural Strength (psi)	22,500
D256	IZOD Impact Strength (Ft-Lbs/Inch)	1.20
D638	Tensile Strength (psi)	20,000
D732	Shear Strength (psi)	10,000
D952	Bond Strength (lb)*	1,500
	Temperature - Operating	-65°F (-54°C) to +175°F (+79°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 Material

- Nitrile

Sealing Element Material Specification

Sealing Material	Temperature - Operating
Nitrile	-40°F (-40°C) to +250°F (+121°C)



Description

Matrix CPG® is a superior performance biaxially orientated PTFE gasket material with a unique Corrugation Profile. The material has been specially formulated to accept this corrugated effect.

Applications

Matrix CPG® is ideal for glass lined, plastic and FRP flanges where high gasket stress are not possible.

Features

- Matrix CPG® has been designed to achieve low leakage at minimal load. The high and low density points across the sealing area allow varying loads to be applied radially but achieve a consistently low leak rate.
- Excellent chemical resistance.
- Made in the U.S.A.
- Gasket Type: Full Face and Raised Face available.

Approvals

Complies with the requirements of FDA21 CFR 177.1550. Test information is available for: HOBT, ROTT, EN 13555

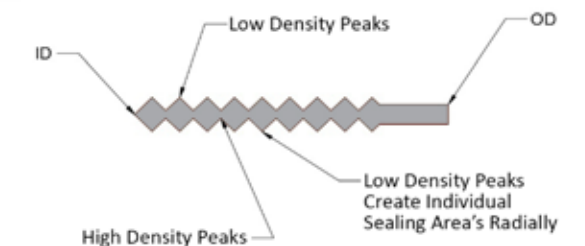
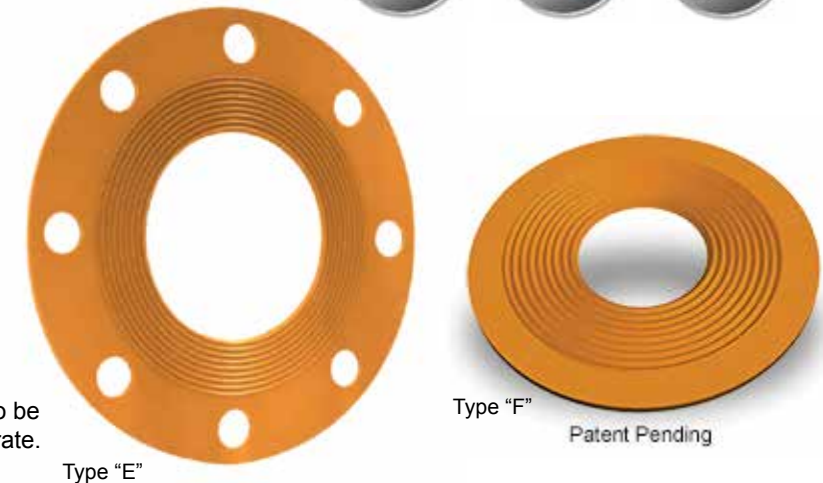
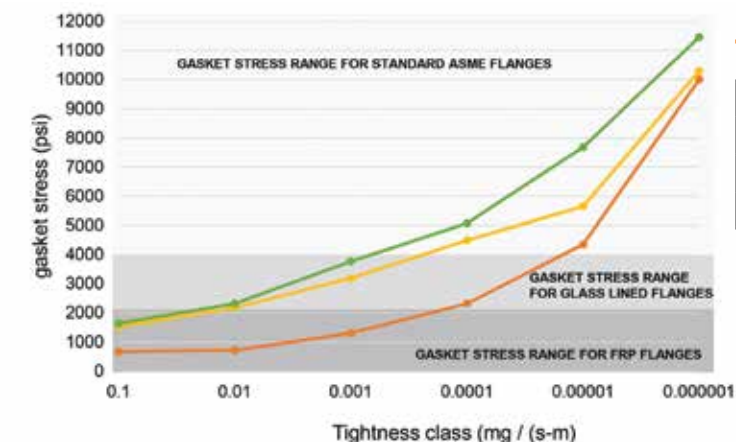
Operating Limitations

Minimum Temperature: -450°F (-268°C).
Maximum Temperature: +500°F (+260°C).
Maximum Pressure: 1235 psi (85 Bar).

Matrix CPG® Size Range:

Thickness: 1/8 in or 3.0mm.
Pressure Class Range: ASME 150lb thru 300 lb.
Nominal Pipe Size 1/2 in thru 24 in.
Non-standard sizes available on request.

Tightness vs Gasket Stress



Creep Relaxation (EN 13555)

Test Temp. Tp	Initial Gasket Stress Qi (MPa)	Stiffness C (kN/mm)	Remaining Gasket Stress Qr (MPa)	Relaxation Factor PQR (Tp)	Qsmax (MPa)
25°C	220	500	213	0.97	>220
175°C	220	500	180.1	0.82	>220
225°C	220	500	179.5	0.82	>220

Typical Physical Properties (ASTM)

F36 Compression	30%
F36 Recovery	50%
Density	1.5 g/cc
F149 Dielectric Strength	16 kV/mm

