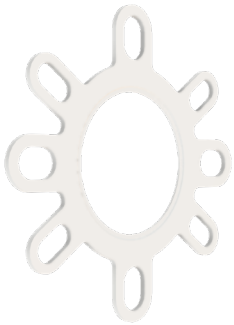
ENCASE™
Custom, Molded ePTFE Gaskets

The ENCASE™ gasket delivers the ingenuity and high performance of GORE® Universal Pipe Gasket in a wide array of custom designs. For the first time, GORE® Universal Pipe Gasket technology is available to an expanded market with nonstandard applications in a large array of customized dimensions.

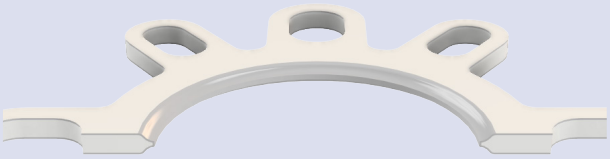
When combined with VSP's OPRA™ reduced area technology and expertise, the custom designed ENCASE gasket exceeds industry standards and delivers high tightness sealing with extremely low creep.

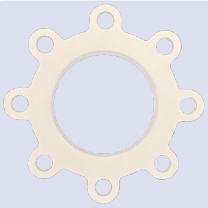


Made with GORE® Universal Pipe Gasket

Bringing the Ingenuity and High Performance of GORE® Universal Pipe Gasket to Non-Standard Applications & Equipment

- For applications outside of standard ASME and DIN pipe flange gaskets
- Ideal for non-standard industrial and railcar equipment flanges
- Dramatically expands the applications for GORE® Universal Pipe Gasket technology
- Improved low stress to seal performance, longevity and reliability; i.e. OPRA designs
- Dramatic sealing improvement on flat-face FRP flanges
- Remarkable stability and chemical resistance
- 100% expanded PTFE gasket providing broad chemical resistance





ENCASE OPRA gaskets for FRP and epoxy lined, flat face flanges; dramatically improved sealing performance compared to standard full face ePTFE gaskets.

Non-standard ID/OD ENCASE gaskets on railcar fill port manways, replacing unreliable, hard PTFE and FKM gaskets.

VSP Technologies deploys a team of Engineers and Fluid Sealing Specialists who provide engineered solutions for your unique sealing requirements.

8140 Quality Drive, Prince George, VA 23875
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ENCASE PHYSICAL & PERFORMING PROPERTIES*

ENCASE™	THICKNESS			TEST CONDITIONS		
	1.5 mm (1/16")	3.0 mm (1/8")	6.0 mm (1/4")	Gasket Stress	Temperature	Pressure
SEALABILITY						
Q_{min} (L0.1) Q^{min}_{1} (L0.01) Q_{Smin}	6 MPa (870 psi) 8 MPa (1,160 psi) 5 MPa (725 psi)	5 MPa (725 psi) 8 MPa (1,160 psi) 6 MPa (870 psi)	5 MPa (725 psi) 8 MPa (1,160 psi) 8 MPa (1,160 psi)	Variable [2]	Room	40 bar (580 psi)
m & y	2.4 & 10.3 MPa (1,500 psi) for steel material [4] 1.4 & 5 MPa (725 psi) for glass-lined steel material [5, 6]			Variable [3]	Room	Variable [3]
ASTM F37-95	0.48 ml/h [7]			6.9 MPa (1,000 psi)	Room	0.5 bar (7 psi)
ARLA Before After	2.86E-05 mg/s < 1E-07 mg/s	1.29E-04 mg/s < 1E-07 mg/s		34.5 MPa (5,000 psi)	315 °C (600 °F)	55 bar (800 psi)
ROTT Gb a Gs	441 psi 0.3 8.55E-01 psi	155 psi 0.411 5.41E-02 psi	358 psi 0.349 3.30 psi	Variable [8, 10]	Room	Variable [8]
RELAXATION						
P_{QR} [2]	0.84	0.77	0.75	10 MPa (1,450 psi)	Room	
	0.92	0.86	0.79	20 MPa (2,900 psi)		
	0.96	0.92	0.85	30 MPa (4,350 psi)		
	0.59	0.44	0.38	10 MPa (1,450 psi)	150 °C (302 °F)	
	0.76	0.59	0.42	20 MPa (2,900 psi)		
	0.90	0.79	0.61	30 MPa (4,350 psi)		
	0.46	0.36	0.29	10 MPa (1,450 psi)	230 °C (446 °F)	
	0.78	0.49	0.39	20 MPa (2,900 psi)		
	0.81	0.69	0.55	30 MPa (4,350 psi)		
ASTM F38-95	11 % [7]			20.7 MPa (3,000 psi)	100 °C (212 °F)	
ARLA	23 %	52 %		34.5 MPa (5,000 psi)	315 °C (600 °F)	
CRUSH STRENGTH						
QS_{max} [2]	230 MPa (33,360 psi)	230 MPa (33,360 psi)	200 MPa (29,010 psi)		23 °C (73 °F)	
ROTT [8]	276 MPa (40,031 psi)	250 MPa (36,260 psi)			Room	
COMPRESSIBILITY						
ASTM F36-95	55 % [9]			17.2 MPa (2,500 psi)	Room	
RECOVERY						
ASTM F36-95	16 % [9]			17.2 MPa (2,500 psi)	Room	

1 Up to L0.01 and QA ≥ 20 MPa
2 Tested per EN 13555
3 Tested per CETIM, reference report no.74630/6J1/a
4 Internal pressure up to 40 bar (580 psi) & T3 seal
5 Tested thickness 3.0 mm (1/8")
6 Internal pressure up to 10 bar (145 psi) & T3 seal
7 Tested thickness 0.08 mm (0.031")
8 Tested per ROTT Draft 9 Soft Gasket Test Procedure
9 Tested thickness 1.14 mm (0.045")
10 ROTT ASTM F-2836-18 (1/4" ENCASE)

* The performance and physical property data provided is derived from industry test standards performed on GORE® Universal Pipe Gaskets. These standards dictate the gasket geometry and size of the test samples. Per the Scope of the standards the data derived is representative of the material only, and is independent of the actual shape or design of the gaskets. If there are questions regarding the applicability of the GORE® Universal Pipe Gasket data in VSP ENCASE™ gasket designs, please contact VSP Technologies engineering personnel.

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