Urethane Filled Expanded Aluminum Gasketing

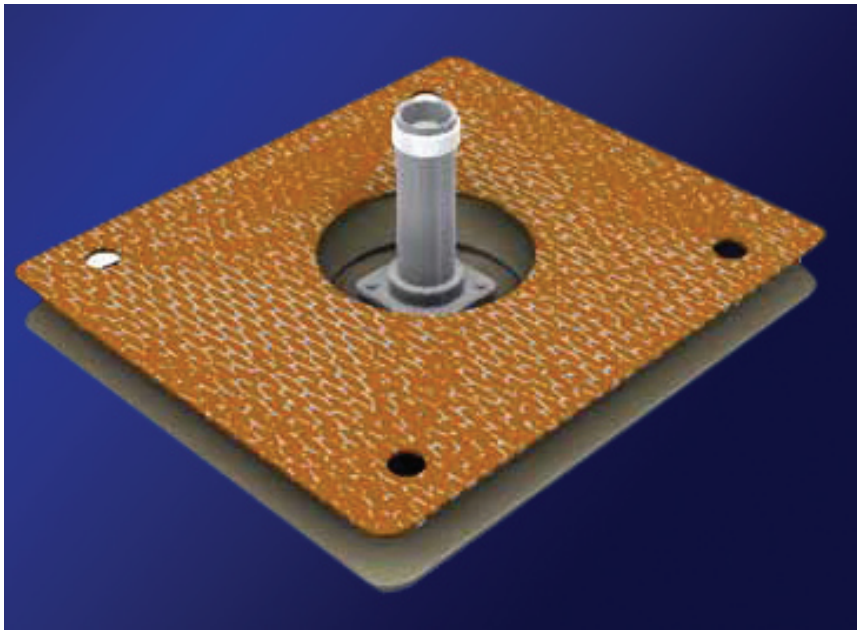
METALASTIC™ EXP-URE

Customer Value Proposition:

Parker Chomerics urethane filled expanded aluminum gaskets provide a soft, electrically conductive fluid and pressure sealing solution for a variety of flange to flange assemblies. Developed to minimize galvanic corrosion of interfacing surfaces that require electrical bonding, these fully-cured gaskets are an effective solution in applications requiring lightning strike grounding or EMI shielding. With numerous performance improvements when compared to traditional gasketing alternatives, customers can expect a 30% lower total cost of ownership from various contributing factors including the avoidance of assembly rework and material replacement.

With successful adoption across numerous military and commercial applications, common usages include:

- Exterior mounted device bases (antennas, radars, lighting, etc.)
- Access panel assemblies (electronics bays and hatches)
- Connector / waveguide assemblies



Features and Benefits:

Conformable, high surface affinity urethane provides superior fluid sealing	Superior fluid sealing results in corrosion reductions up to 300% when compared to traditional sealing alternatives, resulting in rework cost reductions of up to 50%.
Soft urethane requires low deflective forces	Low deflective forces allow for increased design freedom for the interfacing assembly, resulting in cost optimization through reductions in fastener quantities, flange thickness, assembly tolerances and weight.
Wave-formed aluminum provides electrical continuity at gasket deflection as low as 15%	Electrical continuity at gasket deflection as low as 15% promotes full surface electrical contact between gasketing and mating surfaces in highly variable applications where deflection is commonly localized around fasteners. This promotes optimized electrical performance and minimized system failures and associated rework costs.
Expanded aluminum promotes uniform distribution of fastener loads	Uniform distribution of fastener loads eliminates harmful pitting and scoring commonly found with woven-wire based gasketing solutions due to point-stress created by wire overlap locations. Lower stress concentrations reduce the associated rework costs of flange cracking due to stress fatigue.
Expanded aluminum promotes optimized electrical performance	Optimized electrical performance is gained through the elimination of point-to-point contact resistance associated with woven wire gasketing technologies. Improved electrical efficiency promotes minimized system failures and resulting rework costs.

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Product Information
Urethane-Filled Expanded Aluminum Gasketing

Parker Chomerics Urethane Expanded Metalastic gaskets are available in customer specified finished gasket form factors. Gasket fabrication / conversion is easily done through standard gasket cutting techniques such as steel-rule dies. Bulk sheet material specifications are available upon request.

Gaskets are available in two standard thicknesses. Thicker material is recommended for applications requiring more design leniencies due to assembly design deficiencies such as board tolerances, thin flange thicknesses, and broad fasteners.

Table 1: Dimensional Parameters

Thickness in (mm)	Maximum Width in (mm)	Maximum Length in (mm)
0.030 (0.70)	12.0 (304.8)	22.0 (558.8)
0.055 (1.40)	12.0 (304.8)	22.0 (558.8)

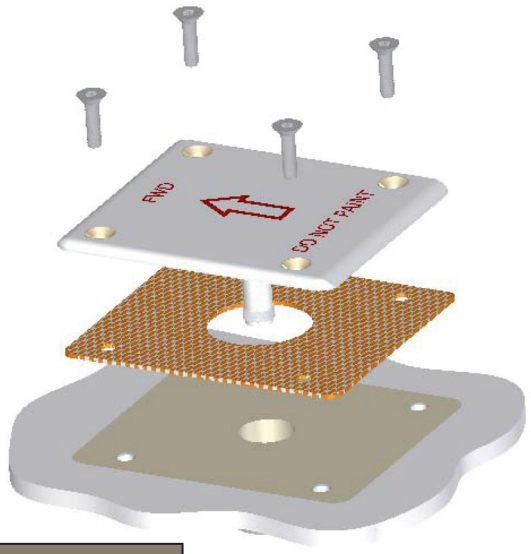

Table 2: Design Tolerances

Parameters	Values in (mm)
Thickness Tolerance	.030: ±0.006 (0.15) .055: ±0.008 (0.20)
Width/Length Tolerance	<10: ±0.015 (0.38) 10 to 15: ±0.020 (0.51) >15: ±0.20% nominal
Minimum Wall Thickness	0.125 (3.18)
Minimum Hole Diameter	0.060 (1.52)

Table 3: Product Performance

Typical Properties	Values	Units	Test Method
Metal	3003 Aluminum Alloy	-	-
Elastomer	Translucent Orange Urethane	-	-
Electrical Thru-Resistance	.0015	Ohms	ASTM D575
Shielding Effectiveness*	>90***	dB	CHO TP09**
Corrosion Resistance*	-	-	Various
High Temperature*	135 (275)	°C (°F)	Various
Low Temperature*	-54 (-65)	°C (°F)	Various
Fluid Resistance*	-	-	Various
RoHS	Pass	-	-

* Additional data available upon request
** Copies available at www.chomerics.com
*** All frequencies; 10 MHz to 18 GHz.

Table 4: Ordering Information

Part Number	Configuration	Unit Of Measure
08-5602	Sheet: 0.055" x 12.0" x 22.0"	Each
08-5302	Sheet: 0.030" x 12.0" x 22.0"	Each
08-6502-XXXX[1]	Cut Gasket, 0.055" Thick	Each
08-6005-XXXX[1]	Cut Gasket, 0.030" Thick	Each

[1] XXXX to be replaced with part number specific geometry identifier.

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