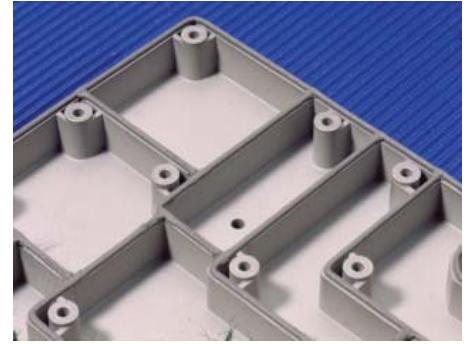


Form-In-Place Conductive and Non-Conductive Gaskets

CHOFORM® & ParPHorm®

Selector Guide for Shielding and Sealing Solutions



Customer Value Proposition:

This selector guide lists seven EMI shielding Form In Place "FIP" gasket materials. They provide the lowest total cost of ownership for most opportunities. Multiple filler grades balance material cost versus performance and complex pattern applications. Parker Chomerics CHOFORM and ParPHorm FIP materials can reduce installed cost of an EMI gasket by up to 60%.

A range of conductive particle technologies combined with thermoset and RTV silicone systems provide a material selection for most opportunities. Multiple filler grades balance material cost versus performance and can provide low cost alternatives for less demanding applications. Chomerics corrosion resistant materials inherently provide protection against galvanic activity. They may eliminate the need for nickel or tin plating and or secondary environmental gaskets. Chomerics general purpose materials exhibit excellent electrical and mechanical properties on metallic and shielded plastic housings. Chomerics silver filled materials provide high shielding and conductivity critical for inter-compartmental shielding.

CHOFORM delivers a greater deflection range, lower deflection forces & improved reliability. FIP materials are available in both uncured bulk form and dispensed onto housings. We can reduce costs by material selection, design, dispense technique and supply chain management. Let us work with you in the design phase to avoid unnecessary manufacturing costs.



Product Features:

- >60 dB shielding effectiveness 200 MHz to 12 GHz
- Electrical conductivity as low as .003 ohm-cm
- Lower deflection forces and a broad deflection range
- Corrosion resistant materials can eliminate plating or secondary environmental gasket
- Good adhesion to many substrates
- UL 94 V-0 (as tested by Chomerics), RoHS compliant and halogen free materials
- Supply chain management providing ongoing logistics
- Low cost and rapid prototyping

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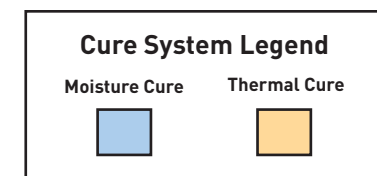
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Form-In-Place Selector Guide

CHOFORM® - Conductive Form-In-Place Gaskets										
Table 1 - Typical Properties	Test Procedure	Units	CHOFORM® 5513	CHOFORM® 5528	CHOFORM® 5526	CHOFORM® 5538	CHOFORM® 5541	CHOFORM® 5550	CHOFORM® 5560	
Features	--	--	Excellent electrical properties and adhesion	Soft, Low closure-force	High Conductivity, Excellent Gounding and Shielding	Corrosion Resistant, Small Bead	Corrosion Resistant, High Temp	Soft Ni/C, Corrosion Resistant	Excellent corrosion resistance on Aluminum	
Conductive Filler	--	--	Ag/Cu	Ag/Cu	Ag	Ni/C	Ni/C	Ni/C	Ni/Al	
Resin System	--	--	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
Number of Components	--	--	2 (1:1 by volume)	1	1	1	1	1	1	
Cure System	--	--	Thermal	Moisture	Moisture	Moisture	Thermal	Thermal	Thermal	
Cure Schedule Tack Free Time Handling time Full Cure	--	--	30 mins at 140°C 30 mins at 140°C 30 mins at 140°C	18 mins at 22°C & 50% RH 4 hours at 22°C & 50% RH 24 hours at 22°C & 50% RH	18 mins at 22°C & 50% RH 4 hours at 22°C & 50% RH 24 hours at 22°C & 50% RH	18 mins at 22°C & 50% RH 4 hours at 22°C & 50% RH 4 hours at 22°C & 50% RH	30 mins at 150°C 30 mins at 150°C 30 mins at 150°C	30 mins at 150°C 30 mins at 150°C 30 mins at 150°C	30 mins at 150°C 30 mins at 150°C 30 mins at 150°C	
Hardness	ASTM D 2240	Shore A	53	40	38	65	75	55	55	
Tensile Strength	ASTM D 412	psi	350	125	80	325	500	175	165	
Elongation	ASTM D 412	%	225	100	75	65	125	175	150	
Specific Gravity	ASTM D 395	--	3.4	3.4	3.6	2.2	2.4	2.2	1.8	
Volume Resistivity	Chomerics MAT-1002	Ω-cm	0.004	0.005	0.003	0.050	0.030	0.035	0.130	
Shielding Effectiveness (avg 200 MHz→12 GHz)	Modified IEEE-299	dB	> 70	> 70	>100	> 60	>65	>65	> 90	
Galvanic Corrosion Resistance Against Aluminum	Chomerics TM-100	Weight Loss mg	NR	NR	NR	10	32	20	4	
*Compression Set 22 hrs. @ 70°C	ASTM D 395 Method B	%	28	45	45	45	30	25	25	
Maximum Use Temperature	--	°C (°F)	125 (257)	85 (185)	85 (185)	85 (185)	150 (302)	125 (257)	125 (257)	
Flammability rating**	UL 94	--	V-0	V-0	V-0	V-0	V-0	V-0	V-0	
Adhesion Trivalent Chromate Coating on Aluminum	Chomerics WI 1038	N/cm	20	3.8	9	9	18	12	6	
Force Deflection at 30% English Metric	ASTM D 575 Modified ASTM D 575 Modified	lb-f/in N/cm	60 105.1	20 35.0	15.0 26.3	28.5 49.8	81.0 141.8	32.4 56.7	16.06 28.1	
Bead Size Smallest Recommended Largest Recommended (Single pass)	Height by Width Height by Width	inches (mm) inches (mm)	0.018 x 0.022 (0.46 x 0.56) 0.062 x 0.075 (1.57 x 1.91)	0.018 x 0.022 (0.46 x 0.56) 0.039 x 0.052 (1.00 x 1.32)	0.018 x 0.022 (0.46 X 0.56) 0.042 x 0.049 (1.07 X 1.24)	0.015 x 0.020 (0.38 X 0.51) 0.030 x 0.034 (0.76 X 0.86)	0.026 x 0.032 (0.66 X 0.81) 0.059 x 0.070 (1.50 X 1.80)	0.038 x 0.044 (0.96 X 1.14) 0.060 x 0.071 (1.50 X 1.80)	0.039 x 0.045 (1.00 x 1.14) 0.062 x 0.075 (1.57 x 1.91)	
Shelf Life (Bulk Material)	Chomerics	months	6 at 5±2°C	6 at -10±2°C	6 at 22±5°C	5 at 22±5°C	6 at -10±2°C	6 at -10±2°C	6 at -10±2°C	

*Compression set is expressed as a percentage of deflection per ASTM D395 Method B., at 25% deflection. To determine percent recovery, subtract 1/4 of stated compression set value from 100%. For example, in the case of 30% compression set, recovery is 92.5%.

**UL 94 V-0 testing performed by Chomerics



The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

ParPHorm® - Non-Conductive Form-In-Place Gaskets					
Table 2 - Typical Properties	Test Methods	Units	ParPHorm 1800	ParPHorm S1945-25	ParPHorm L1938-45
Hardness,	ASTM D2240	Shore A	20	25	45
Tensile Strength,	ASTM DD412	(min.) (psi)	150	277	616
Elongation	ASTM D412	%	650	316	271
Specific Gravity	ASTM D297	--	1.4	0.78	1.24
Compression Set 70 hrs., 25% deflection @ 212 °F (100°C) 70 hrs. @ 158 °F 2000 hrs. @ Room Temp 2000 hrs. @ 158 °F	ASTM D395 Method B	%	35 - - -	42 21 - -	29 14 29 -
Cure System	--	--	Moisture	Thermal	Thermal
Cure Schedule Tack Free Time Handling Time Full Cure	--	--	18 mins at 22°C & 50% RH 4 hours at 22°C & 50% RH 24 hours at 22°C & 50% RH	30 minutes @ 140°C 30 minutes @ 140°C 30 minutes @ 140°C	30 minutes @ 140°C 30 minutes @ 140°C 30 minutes @ 140°C
Color	--	--	Dark Grey	Dark Grey	Rust
Resin System	--	--	Silicone	Silicone	Fluorosilicone

Value-Added Capabilities

Supply Chain Management

We will coordinate with the housing supplier or can provide in-house injection molding to ensure on-time delivery. We will do secondary assembly of components, labeling, pad printing, painting. Our management will provide one supplier responsible for on time delivery of a quality part.

Table 3 - CHOFORM Ordering Information

Material	Part Number	Material Weight	Packaging Type + Size
5513	19-26-5513-0850	Part A 450 grams, Part B 475 grams	2X 6fl. oz. SEMCO Cartridges
5526	19-26-5526-0850	850 grams	12 fl. oz. Aluminum Cartridge
5528	19-26-5528-0850	850 grams	12 fl. oz. Aluminum Cartridge
5538	19-26-5538-0650	650 grams	12 fl. oz. Aluminum Cartridge
5541	19-26-5541-0650	650 grams	12 fl. oz. Aluminum Cartridge
5550	19-26-5550-0575	575 grams	12 fl. oz. Aluminum Cartridge
5560	19-26-5560-0500	500 grams	12 fl. oz. Aluminum Cartridge

Samples typically provided in 30cc syringes

Table 4 - ParPHorm Ordering Information

Material	Part Number	Material Weight	Packaging Type + Size
1800	19-26-1800-0345	345 grams	12 fl. oz. Aluminum Cartridge
1936	19-26-1936-0175	175 grams	6 fl. oz. SEMCO Tube
1938	19-26-1938-0200	200 grams	6 fl. oz. SEMCO Tube
1945	19-26-1945-0250	250 grams	12 fl. oz. SEMCO Tube

SEMCO is a registered trademark of PRC-DeSoto, Inc.

Corporate Facilities

To Place an Order Please Contact a Customer Service Representative at the Following Locations

North America

Division Headquarters

Woburn, MA
Phone +1 781-935-4850
Fax +781-933-4318
chomailbox@parker.com

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Phone +44 1494 455400
Fax +44 14944 55466
chomerics_europe@parker.com

Asia Pacific

Hong Kong
Phone +852 2428 8008
Fax +852 2786 3446
chomerics_ap@parker.com

Cranford, NJ

Phone +1 908-272-5500
Fax + 1 908-272-2741

Manufacturing Facilities

Woburn, MA; Hudson, NH; Cranford, NJ ; Millville, NJ; Fairport, NY; Grantham, UK; Saint Ouen l'Aumone, France; Beijing, Shanghai, Shenzhen, and Tianjin, China; Guadalajara and Monterrey, Mexico; Sadska, Czech Republic; Chennai, India; Selangor, Malaysia.

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