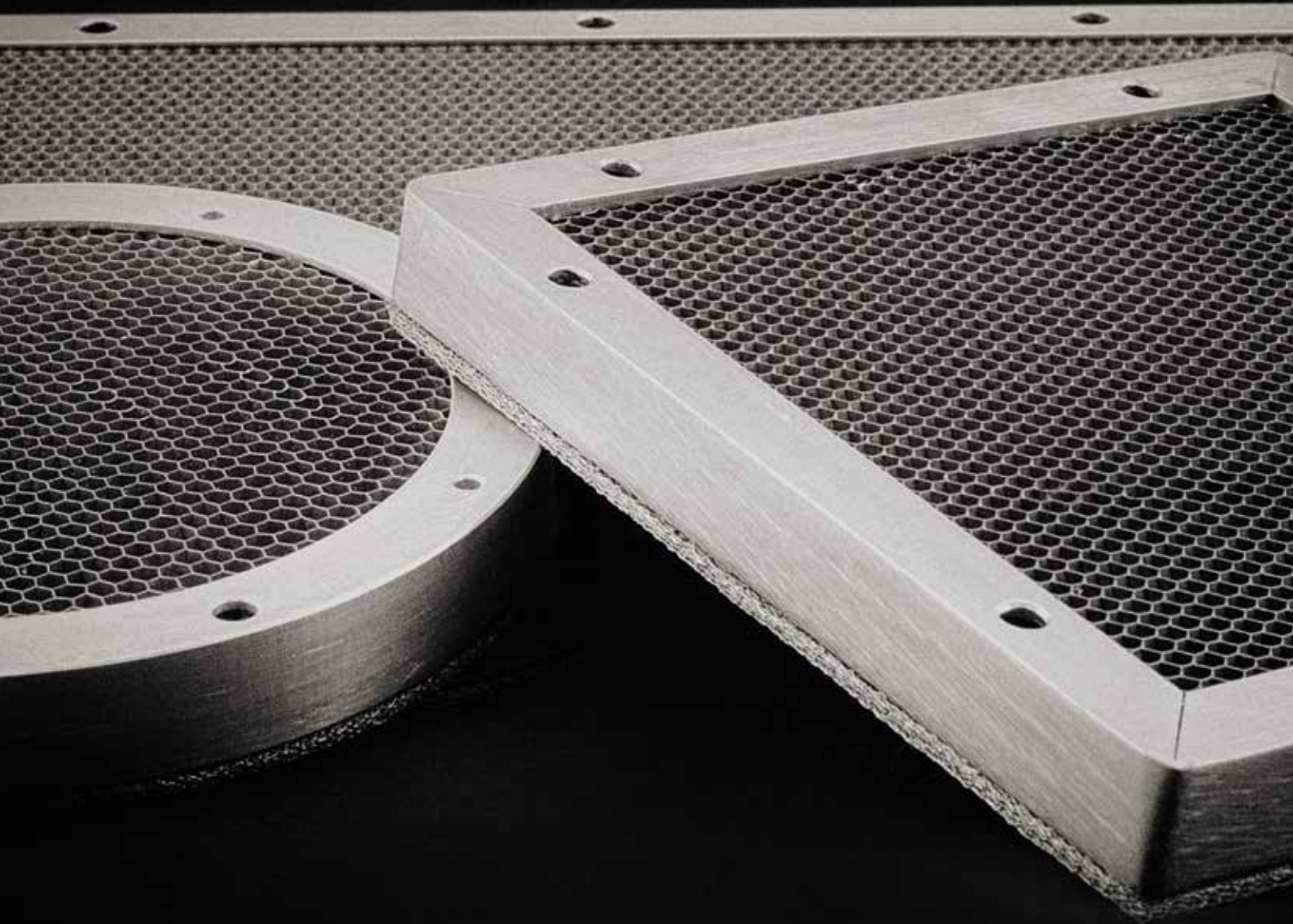




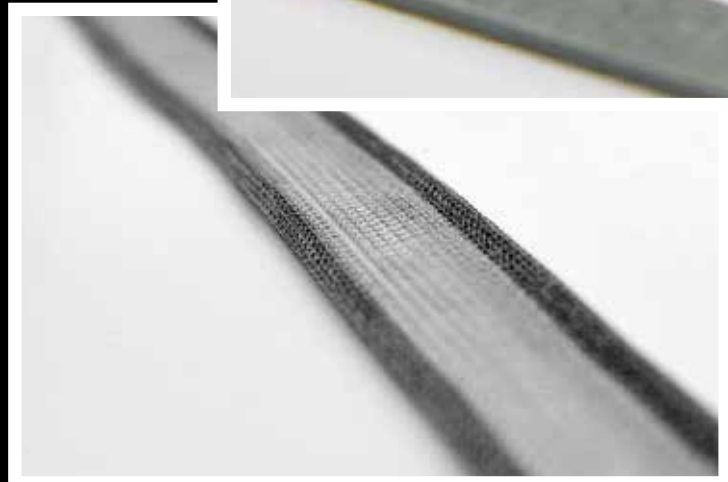
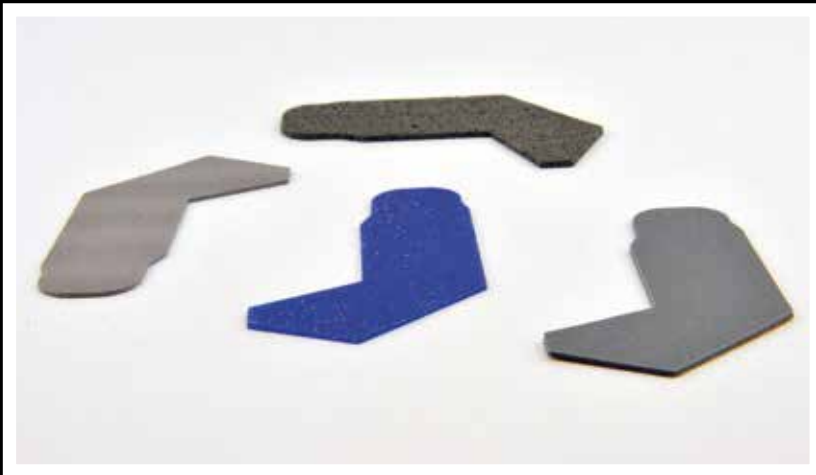
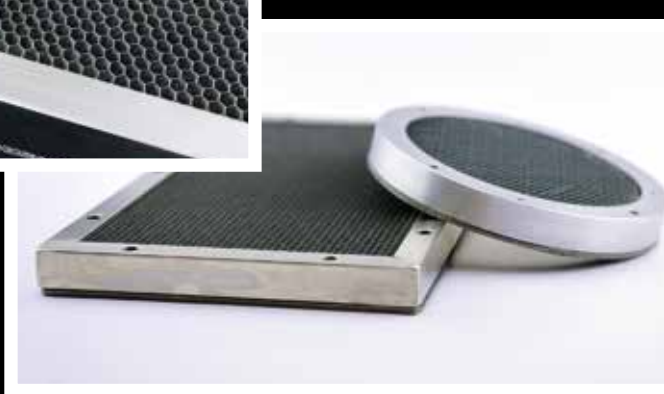
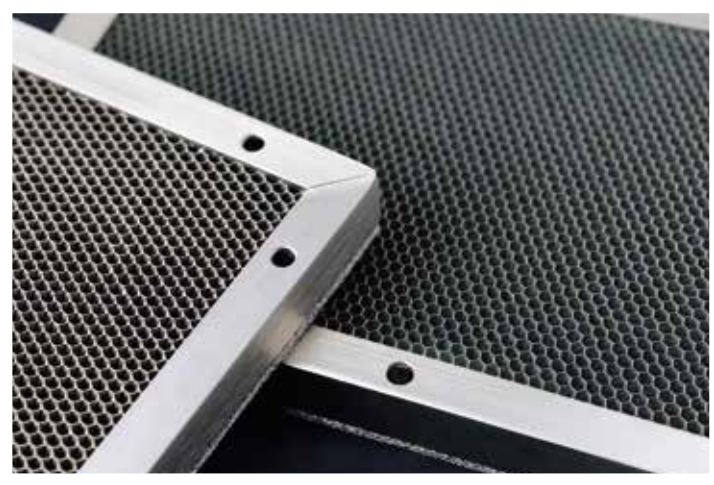
emcemi

YOUR SHIELDING SOLUTION SPECIALIST



Product Range 2017





About EMC EMI shielding solutions

EMCEMI Staff have between them, over 50 years' experience in the manufacturing processes involved in making high quality & reliable EMC & RFI components, while specialising in the manufacture and supply of a wide range of products which are manufactured at our brand new factory in Essex in the United Kingdom.

We manufacture components to MIL83528C specification. These include aluminium and steel honeycomb ventilation panels, conductive silicone loaded elastomers, orientated wires in silicone and our own knitted wire mesh products amongst others.

These can be supplied in a wide range of profiles including, compound, sheets, continuous lengths, O rings, moulded and fabricated gaskets or to a specific drawing depending on your requirement

We also have the advantage of manufacturing a wide range of quantities from single piece prototype runs all the way up to mass production runs so we can manage your requirement, when you need it, to minimise lead time and your expense with storage.

When it comes to our conductive silicones, another advantage of manufacturing our own range of unique conductive silicones, is that our compounds are blended in-house which enables us to use a higher proportion of conductive particles than our competitors giving our customers a better performing product (test results from 10MHz to 18GHz). These raw compounds can also be purchased; please contact us directly for more information.

As our customer, you also benefit from working with a ISO9001:2008 accredited company and quality controlled production process giving you piece of mind along with the flexible approach & quick turn around on your EMC components, with conductive silicone elastomers being available in just 7-10 days.

So please contact our team via a wide range of methods listed below:

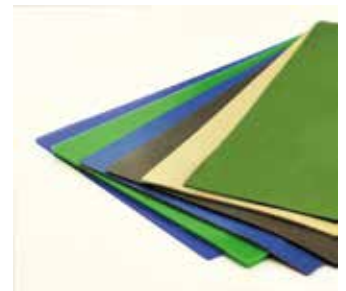
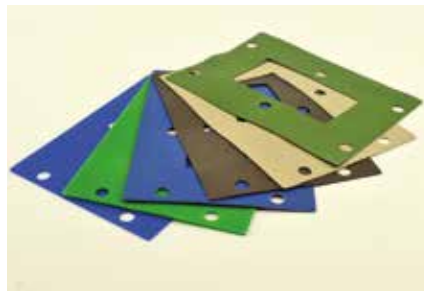
- Call our Head Office on : +44 (0) 1787 460914
- Live chat feature on our website
- Email us on info@emcemi.com

We look forward to working with yourselves in the future and building a partnership in business...

EMC EMI - Your Shielding Solutions Specialist

EMC/RFI

Extrusions
O Rings
Materials Data
Oriented Wires in Silicone
Woven & Expanded Wire in Elastomers
Honeycomb Vent Panels
Combined EMC & Dust Filter
EMP Honeycomb Vents
Conductive Foam
Form in Place Gaskets
Connector Gaskets
Cable Glands
Conductive Adhesive
Microwave Absorber
Board Level Shielding Cans
Gaskets
Copper Tape
Aluminium Tape



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9  **Connector Gaskets**

10  **Conductive Elastomer Moulded 'O' Rings**

11  **Knitted Wire Mesh Moulded to Silicone/Fluorosilicone**

12-13  **Oriented Wires in Silicone**

14  **Expanded Wire Gasket**

15-17  **Aluminium Honeycomb Vents**

18  **Round Vents**

Page Product

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20  **Knitted Wire Mesh over Elastomer Core**

21  **Knitted Wire Mesh with Environmental IP Carrier**

22  **Compressed Mesh 'O' Rings**

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25  **Conductive Adhesives**

26-27  **Shielded Windows**

28  **Conductive Sponge Material**

29  **Neoprene Sponge**

30  **Silicone**

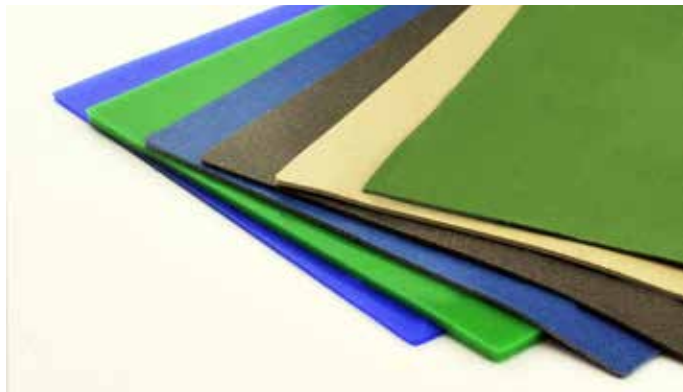




Conductive Elastomers

EMCEMI's own manufactured range of fully cured silicones and fluorosilicones with a wide range of metal particle fillers to suit your requirements. These gaskets offer excellent EMC and environmental properties making this a popular choice of gasket. We recommend a compression ratio of 15% to 20% and to avoid over compression we can fit 'limit' collars or stops to selected gaskets. We are able to offer fabricated and moulded gaskets as well as sheets which enables us to offer you the finished product to your specification or drawing as required.

Need a certain sheet size, no problem we don't charge extra for none standard sheet sizes.



Sheet Sizes

Sheet Size:	Part Numbers
50mm x 50mm	CE-8-X-X-XXXX-1
100mm x 100mm	CE-8-X-X-XXXX-2
150mm x 150mm	CE-8-X-X-XXXX-3
250mm x 250mm	CE-8-X-X-XXXX-4
300mm x 300mm	CE-8-X-X-XXXX-5
400mm x 400mm	CE-8-X-X-XXXX-6
420mm x 450mm	CE-8-X-X-XXXX-7

How to order

Profile Code

8 - Sheet

Self Adhesive Backed

1 - SAB

2 - Non SAB

(Please note SAB is not available on Fluorosilicone Products)

Material Code

1 - Silicone Carbon

2 - Silicone Nickel Graphite

3 - Fluorosilicone Nickel Graphite

4 - Silicone Nickel Graphite Flame Retardant

5 - Silicone Silver Aluminium

6 - Fluorosilicone Silver Aluminium

7 - Silicone Silver Copper

8 - Fluorosilicone Silver Copper

9 - Silicone Nickel

10 - Fluorosilicone Nickel

11 - Silver Plated Nickel

12 - Silver Glass

Example: CE-8-5-0020-7 = Sheet material in Silicone Silver Aluminium with a 2mm thickness and sheet size of 420mm x 450mm

Standard Sheet Thickness:

- 0.3mm = 0003
- 0.5mm = 0005
- 0.8mm = 0008
- 1.0mm = 0010
- 1.2mm = 0012
- 1.4mm = 0014
- 1.6mm = 0016
- 1.8mm = 0018
- 2.0mm = 0020
- 2.4mm = 0024
- 2.6mm = 0026
- 3.0mm = 0030
- 3.2mm = 0032
- 3.5mm = 0035
- 4.0mm = 0040
- 4.5mm = 0045
- 4.8mm = 0048
- 5.0mm = 0050
- 5.5mm = 0055
- 6.0mm = 0060
- 6.4mm = 0064





Conductive Elastomers

EMCEMI's own manufactured range of fully cured silicones and fluorosilicones with a wide range of metal particle fillers to suit your requirements. These gaskets offer excellent EMC and environmental properties making this a popular choice of gasket. We recommend a compression ratio of 15% to 20% and to avoid over compression we can fit 'limit' collars or stops to selected gaskets.

When it comes to EMCEMI's o rings, they are joined together using a vulcanising process, which uses the conductive filler compound with an adhesive to enable the join to cure, thus enabling the join to compress identical to the O ring itself.

All O rings are vulcanised unless moulding is specifically requested. If you need a moulded O ring then please refer to Page 10 of this brochure.

Samples of O rings are available upon request, contact us today.

Solid Cord Rounds

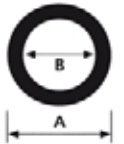


Dim A (mm):	Part Number:
1.0	CE-1-X-0010
1.2	CE-1-X-0012
1.4	CE-1-X-0014
1.6	CE-1-X-0016
1.8	CE-1-X-0018
2.0	CE-1-X-0020
2.4	CE-1-X-0024
2.6	CE-1-X-0026
2.8	CE-1-X-0028
3.0	CE-1-X-0030
3.2	CE-1-X-0032
3.5	CE-1-X-0035
4.0	CE-1-X-0040
4.5	CE-1-X-0045
4.8	CE-1-X-0048
5.0	CE-1-X-0050
5.5	CE-1-X-0055
6.0	CE-1-X-0060
6.4	CE-1-X-0064
7.0	CE-1-X-0070
7.5	CE-1-X-0075
8.0	CE-1-X-0080
8.5	CE-1-X-0085
9.0	CE-1-X-0090
9.5	CE-1-X-0095
10.00	CE-1-X-0100

How to order

Profile Code	Material Code
1 - Cord	1 - Silicone Carbon
2 - Tube	2 - Silicone Nickel Graphite
3 - Solid D	3 - Fluorosilicone Nickel Graphite
4 - Hollow D	4 - Silicone Nickel Graphite Flame Retardant
5 - 'U' Channel	5 - Silicone Silver Aluminium
6 - Hollow 'P' Section	6 - Fluorosilicone Silver Aluminium
7 - Flat Strip	7 - Silicone Silver Copper
8 - Sheet	8 - Fluorosilicone Silver Copper
9 - Hollow Square/Rectangle	9 - Silicone Nickel
10 - TBC	10 - Fluorosilicone Nickel
11 - Cord O ring	11 - Silver Plated Nickel
12 - Tube O ring	12 - Silver Glass
13 - Solid D O ring	
14 - Hollow D O ring	
15 - U Channel O ring	
16 - Hollow P O ring	
17 - Flat Strip O ring	

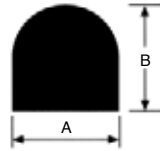
Hollow Round



Dim A (mm):	Dim B (mm)	Part Number:
1.6	0.5	CE-2-X-0016-0005
1.8	0.5	CE-2-X-0018-0005
2.0	0.5	CE-2-X-0020-0005
2.0	0.8	CE-2-X-0020-0008
2.4	0.8	CE-2-X-0024-0008
2.4	1.0	CE-2-X-0024-0010
3.0	0.5	CE-2-X-0030-0005
3.0	0.8	CE-2-X-0030-0008
3.0	1.0	CE-2-X-0030-0010
3.0	1.6	CE-2-X-0030-0016
3.2	0.8	CE-2-X-0032-0008
3.2	1.1	CE-2-X-0032-0011
3.5	0.8	CE-2-X-0035-0008
3.5	1.6	CE-2-X-0035-0016
4.0	1.1	CE-2-X-0040-0011
4.0	1.3	CE-2-X-0040-0013
4.0	1.6	CE-2-X-0040-0016
4.0	2.0	CE-2-X-0040-0020
4.5	1.6	CE-2-X-0045-0016
4.8	2.4	CE-2-X-0048-0024
5.0	1.6	CE-2-X-0050-0016
5.0	3.0	CE-2-X-0050-0030
5.5	1.6	CE-2-X-0050-0016
5.5	3.2	CE-2-X-0050-0032
6.0	1.6	CE-2-X-0060-0016
6.0	3.2	CE-2-X-0060-0032
6.4	1.6	CE-2-X-0064-0016
6.4	3.2	CE-2-X-0064-0032
8.0	5.0	CE-2-X-0080-0050
9.0	6.4	CE-2-X-0090-0064
9.5	6.4	CE-2-X-0095-0064
10.00	8.0	CE-2-X-0100-0080

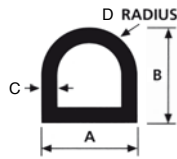


Solid 'D'



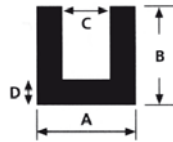
Dim A (mm):	Dim B (mm)	Part Number:
1.63	1.40	CE-3-X-0016-0014
1.73	1.57	CE-3-X-0018-0016
1.98	2.39	CE-3-X-0020-0024
2.26	1.98	CE-3-X-0023-0020
2.54	1.57	CE-3-X-0025-0016
2.79	3.81	CE-3-X-0028-0038
3.43	3.10	CE-3-X-0034-0031
3.96	3.00	CE-3-X-0040-0030
3.96	3.96	CE-3-X-0040-0040
4.45	4.52	CE-3-X-0045-0045
4.78	4.78	CE-3-X-0048-0048

Hollow 'D'



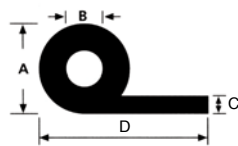
Dim A (mm):	Dim B (mm):	Dim C (mm):	Rad (mm):	Part Number:
3.96	3.96	1.14	1.98	CE-4-X-0040-0040
4.75	4.72	1.27	2.36	CE-4-X-0048-0048
6.35	6.35	1.65	3.18	CE-4-X-0064-0064
7.92	7.92	1.27	3.96	CE-4-X-0080-0080
12.37	8.23	2.03	6.20	CE-4-X-0124-0082

'U' Channel



Dim A (mm):	Dim B (mm):	Dim C (mm):	Dim D (mm):	Part Number:
2.54	2.54	0.86	0.84	CE-5-X-0025-0025
3.20	2.80	0.66	1.27	CE-5-X-0032-0028
3.20	5.72	0.51	1.91	CE-5-X-0032-0057
3.96	3.94	1.57	1.19	CE-5-X-0040-0040
4.45	3.95	1.19	1.91	CE-5-X-0045-0039
8.30	5.90	1.57	2.92	CE-5-X-0083-0060

Hollow 'P' Section



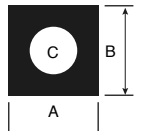
Dim A (mm):	Dim B (mm):	Dim C (mm):	Dim D (mm):	Part Number:
5.08	2.03	1.57	12.70	CE-6-X-0050-0020-0016-0127
5.08	2.03	1.57	21.59	CE-6-X-0050-0020-0016-0215
6.35	3.20	1.57	12.70	CE-6-X-0064-0032-0016-0127
6.35	3.20	1.57	16.00	CE-6-X-0064-0032-0016-0160
6.35	3.20	1.57	22.22	CE-6-X-0064-0032-0016-0220
7.92	4.80	1.57	22.22	CE-6-X-0080-0048-0016-0220
9.10	6.50	1.80	19.81	CE-6-X-0091-0065-0018-0198

Strip Profile:

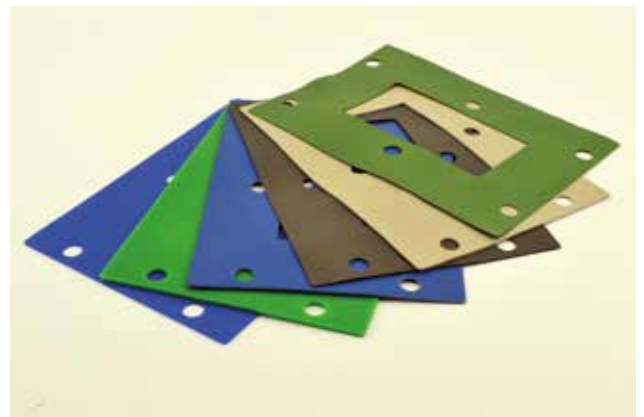


Dim A (mm):	Dim B (mm)	Part Number:
1.00	1.60	CE-7-X-0010-0016
1.00	1.80	CE-7-X-0010-0018
1.00	2.00	CE-7-X-0010-0020
1.60	1.60	CE-7-X-0016-0016
1.60	1.80	CE-7-X-0016-0018
1.60	2.00	CE-7-X-0016-0020
1.60	3.20	CE-7-X-0016-0032
1.60	12.70	CE-7-X-0016-0127
1.60	15.90	CE-7-X-0016-0159
1.60	22.35	CE-7-X-0016-0220
2.00	2.00	CE-7-X-0020-0020
2.00	2.40	CE-7-X-0020-0024
2.00	3.00	CE-7-X-0020-0030
2.00	12.70	CE-7-X-0020-0127
2.00	15.90	CE-7-X-0020-0159
2.00	19.00	CE-7-X-0020-0190
2.00	22.35	CE-7-X-0020-0220
3.00	2.00	CE-7-X-0030-0020
3.00	12.70	CE-7-X-0030-0127
4.80	12.70	CE-7-X-0048-0127
6.40	25.40	CE-7-X-0064-0254

Hollow Square/Rectangle:



Dim A (mm):	Dim B (mm):	Dim C (mm):	Part Number:
3.00	3.00	0.80	CE8-X-0030-0030-0008
6.00	6.00	2.00	CE-8-X-0060-0060-0020
6.00	6.00	3.00	CE-8-X-0060-0060-0030
8.00	8.00	3.50	CE-8-X-0080-0080-0035
9.50	9.50	4.80	CE-8-X-0095-0095-0048



Part Number	CE-?-1	CE-?-2	CE-?-5	CE-?-7	CE-?-9	CE-?-3	CE-?-6	CE-?-8	CE-?-10
Conductive Filler	Carbon	Nickel Graphite	Silver Aluminum (65)	Silver Copper	Nickel	Fluoro Nickel Graphite (70)	Fluoro Silver Aluminum	Fluoro Silver Copper	Fluoro Nickel
Shielding Performance STD 285 /MIL-DTL 83528C (dB)									
10 MHz	30	115	111	115	114	116	114	116	110
100 MHz	65	121	120	122	115	122	122	125	116
400 MHz	60	119	120	119	121	119	118	118	124
1 GHz	N/A	122	121	123	114	122	121	124	117
2 GHz	40	122	119	122	122	122	123	121	112
6 GHz	N/A	115	115	116	117	114	109	117	111
10 GHz	30	114	112	115	114	107	114	115	113
18 GHz	N/A	106	105	104	105	105	103	104	103
Operating Temp Range (°C)	+160 -50	+160 -55	+160 -55	+125 -55	+160 -55	+160 -55	+160 -55	+125 -55	+160 -55
Colour	Black	Dark Grey	Beige	Dark Tan	Grey	Green	Light Green	Green	Dark Green
Shore Hardness (A +/-5) ASTM D2240	60	60	65	65	65	65	70	65	70
Volume Resistivity (ohms) ASTM D991	2.2	0.04	0.008	0.005	0.1	0.05	0.01	0.005	0.1
Specific Gravity (+/- 0.25)	2.0	2.0	2.0	3.5	4.5	2.2	2.0	4.0	4.8

*The results and procedures provides data applicable only to the test enclosure & cover panel design, but which is useful for making comparisons between gasket materials as stated in the MIL-DTL-83528C spec



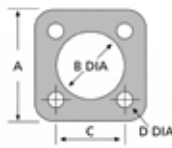
Connector Gaskets

Generally connector gaskets are cut from thin reinforced materials, such as conductive filled aluminium mesh or silicone filled expanded Monel foil, to ensure that the compressive forces exerted on the connector do not distort the gasket. However, for certain applications oriented wires in silicone or conductive silicone EMI shielding materials are selected for their specific properties.



Most gaskets can be made from all standard materials but it is important to consider the 'land-width' around the periphery of a connector gasket if conductive filled aluminium mesh or silicone filled expanded Monel foil are specified. In some instances, where a gasket has fixing holes on each corner, the holes are extended outwards to slots, which helps to prevent damage to the gasket during production and fitting.

MIL-C-5015/26482 Connector Gaskets



Dim A (mm):	Dim B (mm):	Dim C (mm):	Dim D (mm):	Part Number:
22.23	12.70	15.09	4.5	08
25.40	15.88	18.26	4.5	10
27.79	19.05	20.65	4.5	12
30.18	22.23	23.01	4.5	14
32.54	25.40	24.61	4.5	16
34.93	28.58	27.00	5.0	18
38.10	31.75	29.36	5.0	20
41.28	34.93	31.75	5.0	22
44.45	38.10	34.93	5.5	24
50.80	44.45	39.70	5.5	28
57.15	50.80	44.45	6.0	32
63.50	55.58	49.23	6.0	36
69.85	61.93	55.58	6.0	40
76.20	70.64	60.33	6.0	44

How to order

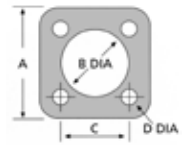
Material Type

- 1 - Silicone Filled Expanded Monel Wire
- 2 - Silicone Filled Expanded Aluminium Wire
- 3 - Fluorosilicone Filled Expanded Monel Wire
- 4 - Fluorosilicone Filled Expanded Aluminium Wire
- 5 - Neoprene Filled Aluminium Wire
- 6 - Neoprene Filled Monel Wire
- 7 - Monel Oriented Wires in Solid Silicone
- 8 - Aluminium Oriented Wires in Solid Silicone
- 9 - Monel Oriented Wires in Solid Fluorosilicone
- 10 - Aluminium Oriented Wires in Solid Fluorosilicone
- 11 - Silicone Nickel Graphite
- 12 - Fluorosilicone Nickel Graphite
- 13 - Silicone Silver Aluminium
- 14 - Fluorosilicone Silver Aluminium
- 15 - Silicone Silver Copper
- 16 - Fluorosilicone Silver Copper

Material Code	Part Number	Thickness
XX	XX	XX
from above list	shell size	in millimeters

For Example: 14-28-0016 = Fluorosilicone Silver Aluminium Connector Gasket to shell size 22 with 1.6mm thickness.

MIL C 38999 Connector Gaskets



Dim A (mm):	Dim B (mm):	Dim C (mm):	Dim D (mm):	Part Number:
15.09	16.25	21.34	4.0	08
18.26	19.30	24.51	4.0	09
18.26	19.30	24.51	4.0	10
20.62	22.48	26.92	4.0	11
20.62	22.48	26.92	4.0	12
23.01	25.78	29.29	4.0	13
23.01	25.78	29.29	4.0	14
24.61	29.05	31.95	4.0	15
24.61	29.05	31.95	4.0	16
26.97	32.35	34.32	4.0	17
26.97	32.25	34.32	4.0	18
29.36	35.18	38.10	4.0	19
29.36	35.18	38.10	4.0	20
31.75	38.35	41.28	4.0	21
31.75	38.35	41.28	4.0	22
34.93	41.53	44.45	4.5	23
34.93	41.53	44.45	4.5	24
38.10	44.70	47.63	4.5	25





Conductive Elastomer Moulded 'O' Rings

Worried about the join, then EMCEMI have the answer. We have a wide range of tooling range from ID's of 5mm up 915mm in cross sections of either 1.8mm or 2.6mm therefore saving on costly mould tools. If you require another cross section then please get in touch as we may have this size also. These gaskets offer excellent EMC and environmental properties making this a popular choice of gasket. We recommend a comparison ratio of 15% to 20% as standard with all our conductive silicones. We can cater for single proto types, all the way up to many production runs.



Solid Round

How to order

Profile Code

11M - Moulded Core original

Size

XXX - Developed length in mm

Material Code

- | | |
|--|-------------------------------------|
| 1 - Silicone Carbon | 6 - Fluorosilicone Silver Aluminium |
| 2 - Silicone Nickel Graphite | 7 - Silicone Silver Copper |
| 3 - Fluorosilicone Nickel Graphite | 8 - Fluorosilicone Silver Copper |
| 4 - Silicone Nickel Graphite Flame Retardant | 9 - Silicone Nickel |
| 5 - Silicone Silver Aluminium | 10 - Fluorosilicone Nickel |
| | 11 - Silver Plated Nickel |
| | 12 - Silver Glass |

Example: CE-12M-2-0018-100 = Moulded Nickel Graphite O ring 1.8mm C/S and 100mm D/L

Inner Diameter	Cross Section	Inner Diameter	Cross Section	Inner Diameter	Cross Section	Inner Diameter	Cross Section
6.6	1.8	12.5	1.8	21.9	1.8	34.6	2.6
6.9	1.8	12.7	2.5	23.4	3.5	34.6	1.8
7.5	1.2	14.0	1.8	23.5	1.8	34.7	1.8
7.6	1.2	15.5	1.8	25.1	1.8	37.2	2.0
9.2	1.8	16.1	1.6	25.4	6.4	37.8	2.6
10.5	1.4	17.2	1.8	27.9	1.8	37.8	1.8
10.8	1.8	18.8	1.8	28.3	1.8	40.9	2.6
11.3	1.3	19.2	2.5	30.0	1.7	44.1	2.6
12.4	1.8	20.3	1.8	31.5	1.8		

Part Number	CE-?-1	CE-?-2	CE-?-5	CE-?-7	CE-?-9	CE-?-3	CE-?-6	CE-?-8	CE-?-10
Conductive Filler	Carbon	Nickel Graphite	Silver Aluminium (65)	Silver Copper	Nickel	Fluoro Nickel Graphite (70)	Fluoro Silver Aluminium	Fluoro Silver Copper	Fluoro Nickel

Shielding Performance STD 285 /MIL-DTL 83528C (dB)										
10 MHz	30	115	111	115	114	116	114	116	110	
100 MHz	65	121	120	122	115	122	122	125	116	
400 MHz	60	119	120	119	121	119	118	118	124	
1 GHz	N/A	122	121	123	114	122	121	124	117	
2 GHz	40	122	119	122	122	122	123	121	112	
6 GHz	N/A	115	115	116	117	114	109	117	111	
10 GHz	30	114	112	115	114	107	114	115	113	
18 GHz	N/A	106	105	104	105	105	103	104	103	
Operating Temp Range (°C)	+160 -50	+160 -55	+160 -55	+125 -55	+160 -55	+160 -55	+160 -55	+125 -55	+160 -55	
Colour	Black	Dark Grey	Beige	Dark Tan	Grey	Green	Light Green	Green	Dark Green	
Shore Hardness (A +/-5) ASTM D2240	60	60	65	65	65	65	70	65	70	
Volume Resistivity (ohms) ASTM D991	2.2	0.04	0.008	0.005	0.1	0.05	0.01	0.005	0.1	
Specific Gravity (+/- 0.25)	2.0	2.0	2.0	3.5	4.5	2.2	2.0	4.0	4.8	

*The results and procedures provides data applicable only to the test enclosure & cover panel design, but which is useful for making comparisons between gasket materials as stated in the MIL-DTL-83528C spec



Knitted Wire Mesh Moulded to Silicone/Fluorosilicone

EMCEMI's own manufactured Knitted Wire which is moulded in to a silicone or fluorosilicone carrier is used to provide an environmental as well as an EMC/RFI sealing gasket. A typical application of these gaskets is in narrow grooves within electronic cabinets and enclosures. Also these gaskets are used when an environmental seal is needed to protect the EMC/RFI gasket.

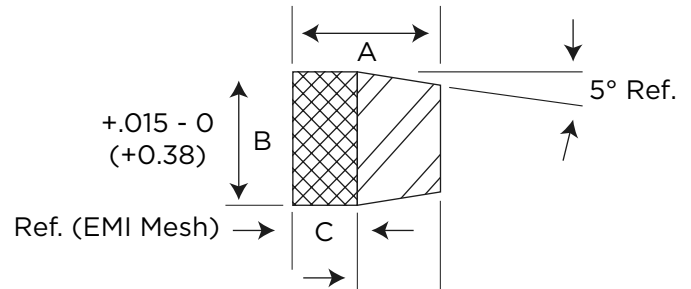
We can supply this as a complete O Ring or as continuous lengths, dependant on your requirement, you can have a wide choice of mesh as well as a choice of carrier.



How to order

Part Number	Gasket Dimensions			
	A	B	C	D
1	1.8	2.5	0.1	XXXXXX
2	2.4	3.2	1.2	XXXXXX
3	3.2	1.6	1.6	XXXXXX
4	3.2	4.5	1.6	XXXXXX
5	4	4	1.6	XXXXXX
6	4.6	4.2	2.3	XXXXXX
7	4.8	4.8	2.4	XXXXXX

Dimension D is length of O Ring in mm, for instance 150mm is 0150 etc.



Shielding Effectiveness

Materials	H_FIELD	E-FIELD	PLANWAVE	
	100 kHz	10MHz	1GHz	10GHz
	dB	dB	dB	dB
Monel	60	130	90	80
Sn/Ph/Bz	90	135	105	95

Figures for type EMC2 - 12.7mm single layer 3.2mm cell size With Alocrom 1200 finish

Performance

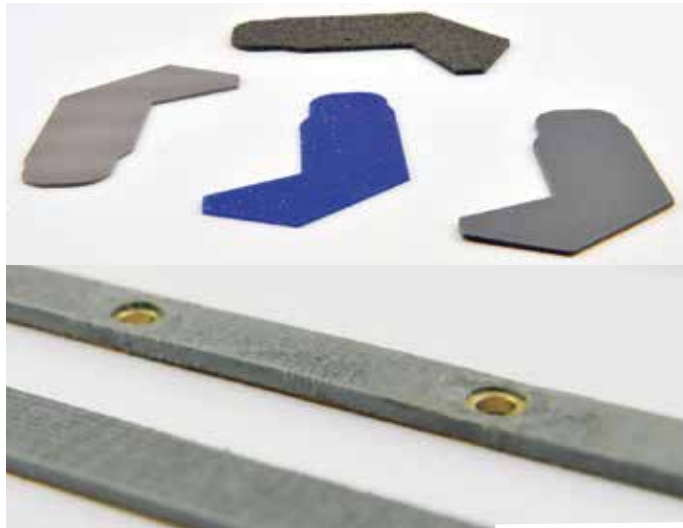
FREQUENCY	FIELD	Performance			
		MONEL	ALUMINIUM	TCS	S/STEEL
1GHz	P	85	76	78	76
10GHz	P	80	65	62	60



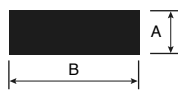
Oriented Wires in Silicone

Oriented wires in silicone are an ideal gasket to provide an environmental seal as well as an EMC shield. The gasket is designed for applications which require long service life and high performance is needed. These types of gaskets are available in either solid silicone or silicone sponge variants and have the option of self adhesive backing.

On silicone sponge material, We would recommend a compression rate of 20% – 25%. On solid silicone material, we would recommend a compression rate of 15-20%. We would like to point out over compression of these gaskets can cause damage and therefore these gaskets can be provided with limit collars or stops.



Standard Sizes



Dim A (mm):	Dim B (mm)	Part Number:
0.8	2.4	OWS-XX-X-X-0008-0024
0.8	3.2	OWS-XX-X-X-0008-0032
0.8	4.8	OWS-XX-X-X-0008-0048
0.8	6.4	OWS-XX-X-X-0008-0064
0.8	8.0	OWS-XX-X-X-0008-0080
0.8	9.5	OWS-XX-X-X-0008-0095
0.8	12.7	OWS-XX-X-X-0008-0127
0.8	114	OWS-XX-X-X-0008-1140
0.8	152	OWS-XX-X-X-0008-1520
0.8	228	OWS-XX-X-X-0008-2280
1.0	2.4	OWS-XX-X-X-0010-0024
1.0	3.2	OWS-XX-X-X-0010-0032
1.0	4.8	OWS-XX-X-X-0010-0048
1.0	6.4	OWS-XX-X-X-0010-0064
1.0	8.0	OWS-XX-X-X-0010-0080

How to order

Profile Code

- 01 - Solid Silicone
- 02 - Silicone Sponge (Minimum Sheet Thickness - 1mm)
- 03 - Solid Silicone Flame Retardant
- 04 - Silicone Sponge Flame Retardant (Min Sheet 1 Thickness - 1mm)
- 05 - Solid Fluorosilicone - FSS

Wire Type

- 1 - Monel Wires
- 2 - Aluminium Wires

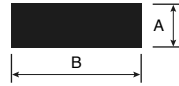
Self Adhesive Backed

- 1 - SAB
- 2 - Non SAB

P/N: OWS-01-1-2-0008-0024 = Monel Wires in Solid Silicone, No SAB, 0.8mm thick x 2.4mm wide.

Dim A (mm):	Dim B (mm)	Part Number:
1.0	9.5	OWS-XX-X-X-0010-0095
1.0	12.7	OWS-XX-X-X-0010-0127
1.0	114	OWS-XX-X-X-0010-1140
1.0	152	OWS-XX-X-X-0010-1520
1.0	228	OWS-XX-X-X-0010-2280
1.2	2.4	OWS-XX-X-X-0012-0024
1.2	3.2	OWS-XX-X-X-0012-0032
1.2	4.8	OWS-XX-X-X-0012-0048
1.2	6.4	OWS-XX-X-X-0012-0064
1.2	8.0	OWS-XX-X-X-0012-0080
1.2	9.5	OWS-XX-X-X-0012-0095
1.2	12.7	OWS-XX-X-X-0012-0127
1.2	114	OWS-XX-X-X-0012-1140
1.2	152	OWS-XX-X-X-0012-1520
1.2	228	OWS-XX-X-X-0012-2280
1.4	2.4	OWS-XX-X-X-0014-0024
1.4	3.2	OWS-XX-X-X-0014-0032
1.4	4.8	OWS-XX-X-X-0014-0048
1.4	6.4	OWS-XX-X-X-0014-0064
1.4	8.0	OWS-XX-X-X-0014-0080
1.4	9.5	OWS-XX-X-X-0014-0095
1.4	12.7	OWS-XX-X-X-0014-0127
1.4	114	OWS-XX-X-X-0014-1140
1.4	152	OWS-XX-X-X-0014-1520
1.4	228	OWS-XX-X-X-0014-2280
1.6	2.4	OWS-XX-X-X-0016-0024
1.6	3.2	OWS-XX-X-X-0016-0032
1.6	4.8	OWS-XX-X-X-0016-0048
1.6	6.4	OWS-XX-X-X-0016-0064
1.6	8.0	OWS-XX-X-X-0016-0080
1.6	9.5	OWS-XX-X-X-0016-0095
1.6	12.7	OWS-XX-X-X-0016-0127
1.6	114	OWS-XX-X-X-0016-1140
1.6	152	OWS-XX-X-X-0016-1520
1.6	228	OWS-XX-X-X-0016-2280
1.8	2.4	OWS-XX-X-X-0018-0024
1.8	3.2	OWS-XX-X-X-0018-0032
1.8	4.8	OWS-XX-X-X-0018-0048
1.8	6.4	OWS-XX-X-X-0018-0064
1.8	8.0	OWS-XX-X-X-0018-0080
1.8	9.5	OWS-XX-X-X-0018-0095
1.8	12.7	OWS-XX-X-X-0018-0127
1.8	114	OWS-XX-X-X-0018-1140
1.8	152	OWS-XX-X-X-0018-1520

Standard Sizes ctd



Dim A (mm):	Dim B (mm)	Part Number:
1.8	228	OWS-XX-X-X-0018-2280
2.0	2.4	OWS-XX-X-X-0020-0024
2.0	3.2	OWS-XX-X-X-0020-0032
2.0	4.8	OWS-XX-X-X-0020-0048
2.0	6.4	OWS-XX-X-X-0020-0064
2.0	8.0	OWS-XX-X-X-0020-0080
2.0	9.5	OWS-XX-X-X-0020-0095
2.0	12.7	OWS-XX-X-X-0020-0127
2.0	114	OWS-XX-X-X-0020-1140
2.0	152	OWS-XX-X-X-0020-1520
2.0	228	OWS-XX-X-X-0020-2280
2.4	2.4	OWS-XX-X-X-0024-0024
2.4	3.2	OWS-XX-X-X-0024-0032
2.4	4.8	OWS-XX-X-X-0024-0048
2.4	6.4	OWS-XX-X-X-0024-0064
2.4	8.0	OWS-XX-X-X-0024-0080
2.4	9.5	OWS-XX-X-X-0024-0095
2.4	12.7	OWS-XX-X-X-0024-0127
2.4	114	OWS-XX-X-X-0024-1140
2.4	152	OWS-XX-X-X-0024-1520
2.4	228	OWS-XX-X-X-0024-2280
3.2	3.2	OWS-XX-X-X-0032-0032
3.2	4.8	OWS-XX-X-X-0032-0048
3.2	6.4	OWS-XX-X-X-0032-0064
3.2	8.0	OWS-XX-X-X-0032-0080
3.2	9.5	OWS-XX-X-X-0032-0095

Dim A (mm):	Dim B (mm)	Part Number:
3.2	12.7	OWS-XX-X-X-0032-0127
3.2	114	OWS-XX-X-X-0032-1140
3.2	152	OWS-XX-X-X-0032-1520
3.2	228	OWS-XX-X-X-0032-2280
4.8	4.8	OWS-XX-X-X-0048-0048
4.8	6.4	OWS-XX-X-X-0048-0064
4.8	8.0	OWS-XX-X-X-0048-0080
4.8	9.5	OWS-XX-X-X-0048-0095
4.8	12.7	OWS-XX-X-X-0048-0127
4.8	114	OWS-XX-X-X-0048-1140
4.8	152	OWS-XX-X-X-0048-1520
4.8	228	OWS-XX-X-X-0048-2280
6.4	6.4	OWS-XX-X-X-0064-0064
6.4	8.0	OWS-XX-X-X-0064-0080
6.4	9.5	OWS-XX-X-X-0064-0095
6.4	12.7	OWS-XX-X-X-0064-0127
6.4	114	OWS-XX-X-X-0064-1140
6.4	152	OWS-XX-X-X-0064-1520
6.4	228	OWS-XX-X-X-0064-2280
8.0	8.0	OWS-XX-X-X-0080-0080
8.0	9.5	OWS-XX-X-X-0080-0095
8.0	12.7	OWS-XX-X-X-0080-0127
8.0	114	OWS-XX-X-X-0080-1140
8.0	152	OWS-XX-X-X-0080-1520
8.0	228	OWS-XX-X-X-0080-2280
9.5	9.5	OWS-XX-X-X-0095-0095
9.5	12.7	OWS-XX-X-X-0095-0127
9.5	114	OWS-XX-X-X-0095-1140
9.5	152	OWS-XX-X-X-0095-1520
9.5	228	OWS-XX-X-X-0095-2280

Shielding Effectiveness (MIL STD 285)

	dB
10 KHz	55
100 KHz	83
1MHz	101
10MHz	120
100MHz	135
400MHz	102
1GHz	95
10GHz	85
Temp Range (°C)	-30 to +160
Wire Count	140 +/- 15% per cm
Compression	20% max

Specification

Material Property Value

Solid Silicone rubber	ZZ-R-765 2b 40
Sponge Silicone rubber	AMS 3195
Fluorosilicone rubber	Mil-R-25988 Gr 50
Monel wire	BS3075 - NA13 (0.11mm D)
Aluminium 5056	AMS 4182 (0.13mm D)
Phosphor Bronze	Cu Sn 6% (0.114mm D)
Temperature range	- 55 to + 250°C

Availability:

- Sheets either 150mm or 228mm wide
- Slit in to strips supplied in any length you require
- Connector Gaskets
- Fabricated Gaskets
- Solid Silicone (140 wires/cm²)
- Silicone Sponge version (100 wires/cm²)
- Fluorosilicone version available of both solid's and sponge'
- Cost Effective due to non-constraints' of sheet size
- Minimum Thickness - 0.8mm for Solid Silicone
- Minimum Thickness - 1.0mm for Silicone Sponge

Features:

- Easily adaptable to uneven surfaces
- Wide range of uses
- EMP survivability

Tolerances:

- Linear: +/- 0.8 mm
- Hole Centres: +/- 0.4mm
- Thickness: +/- 0.2 mm



Expanded Wire Gasket

Expanded Wire Gaskets are available in two thickness 0.5mm and 0.8mm thick. These gaskets offers minimal resistance while also offering an environmental seal. A common usage of these gaskets are connector gaskets and very smooth surfaces. Available in sheet form we can 'die-cut' various shapes of gaskets to suit your requirement.

EMI shielded connector gaskets are fitted in the normal manner and particular care should be taken when passing a gasket over a threaded connector body. Avoid the use of conductive adhesives as they tend to adversely affect the sealing characteristics of most types of gasket.



How to order

Metal Content	Filler	Sheet Size
M - Monel	1 - Silicone	XXXX-XXXX
A - Aluminium	2 - Fluorosilicone	
	3 - Neoprene	

Filler options:

- Silicone - Spec ZZ-R-765 Class 2 CRE
- Fluorosilicone - MIL-R-25988
- Neoprene

Metal Content is the following

- Monel - Spec - QQ-N-281B
- Aluminium - Spec - QQ-A-250

- Available as
- Connector Gaskets
 - Sheets
 - Die Cut Gaskets

Shielding Performance

	10KHz	200KHz	100MHz	1Ghz	EMP Survive
Expanded Monel (unfilled)	52dB	60dB	90dB	70dB	Yes
Woven Aluminium (silicones)	45dB	60dB	90dB	70dB	Yes

Aluminium Honeycomb Vents

Lightweight and versatile aluminium honeycomb vents are supplied in a variety of styles to facilitate mounting requirements and any overall size. Panels are designed to provide minimum pressure drop of airflow through the assembly whilst giving good RF attenuation. Panels are normally supplied using two layers of honeycomb oriented at 90° to provide non polarised attenuation. Straight through panels can be supplied with plating to overcome the polarisation problem.



Vents can be fitted with conductive gasket for improved shielding effectiveness, drilled holes or threaded captive inserts to aid fixing & can also include separate dust filters and protective kick plates to prevent accidental damage.

All panels finished in Alocrom 1200 to stop oxidisation. Other finishes available to order.

Specification

Material Property	Value
Aluminium Frame	6063-T6
Aluminium Honeycomb	5052 grade
Monel Wire	BS3075 NA13
Neoprene Sponge	Mil-R-6130 Type 11 grade A condition soft
Beryllium Copper	alloy 25 (CA172)
Silicone Rubber	ZZ-R-765 Class 2 Grade 40
Aluminium Wire	5056

How to order

Vent Style	Honeycomb style
EMC1	1 - Two Layers (Cris Crossed) @ 6.35mm thick per layer
EMC2	2 - Single Layer
EMC3	3 - 30 degree (One layer straight though 2nd layer @ 30 degrees)
EMC4	4 - 45 degree (One layer straight though 2nd layer @ 45 degrees)
EMC5	5 - 60 degree (One layer straight though 2nd layer @ 60 degrees)
EMC6	
EMC7	
EMC8	
EMC9	

Overall Size	Fixings	Fixing type
XXXX-XXXX	XXX	1 - Insert (Capitive) 2 - Through Hole

Finish	Gasket
1 - Alocrom 1200	1 - Knitted Wire Mesh and Neoprene Sponge (EMC/EMI Shield and Environmental IP67)
2 - Surtec 650	
3 - Nickel Plated	
4 - Tin Plated	
5 - Painted	

For Example: EMC1-I- 2500x2500-15-2-1-2 =

Aluminium Honeycomb Vent – 2 Layers of Honeycomb – 250mm x 250mm square with 15 holes and finished in Alocrom 1200 with a knitted wire mesh and neoprene gasket.

Shielding Effectiveness – Type EMC1

Frequency	Attenuation	Field
10KHz	45	H
100KHz	49	H
1MHz	51	H
1MHz	>100	E
10MHz	>100	E
100MHz	>100	E
1GHz	98	P
10GHz	95	P

Figures for type EMC1 - 2 layers 6.3mm thick honeycomb, 3.2mm cell size at 90° (cross pole) with Alocrom 1200 finish. 285(modified).



Shielding Effectiveness - Type EMC5

Frequency	Attenuation	Field
10KHz	40	H
100KHz	43	H
1MHz	47	H
1MHz	84	E
10MHz	97	E
100MHz	>100	E
1GHz	85	P
10GHz	85	P

Figures for type EMC5 - 2 layers 3.2mm thick honeycomb, 3.2mm cell size at 90° (cross pole) with Alocrom 1200 finish.

Shielding Effectiveness - Type EMC9

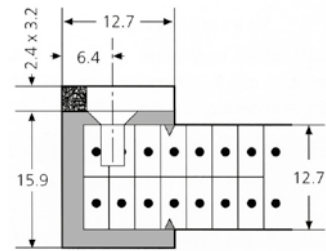
Frequency	Attenuation	Field
10KHz	33	H
100KHz	37	H
1MHz	39	H
1MHz	43	E
10MHz	84	E
100MHz	79	E
1GHz	50	P
10GHz	60	P

Figures for type EMC9 6.4mm single layer 3.2mm cell size with Alocrom 1200 finish.

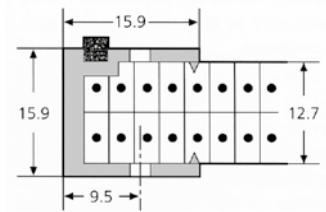
Shielding Effectiveness - Type EMC12 & 13

Frequency	Attenuation	Field
10KHz	51	H
100KHz	57	H
1MHz	>105	H
1MHz	>105	E
10MHz	>105	E
100MHz	>105	E
1GHz	>105	P
10GHz	90	P
18GHz	90	P

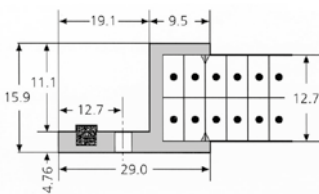
Figures for EMC12 & EMC13 - 2 layers 12.7mm thick honeycomb, 3.2mm cell size at 90° (cross pole) with Alocrom 1200 finish.



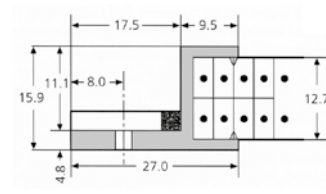
EMC1



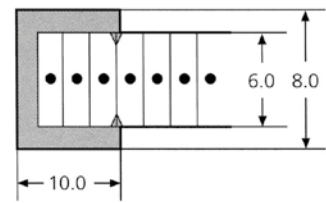
EMC2



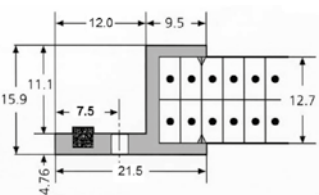
EMC3



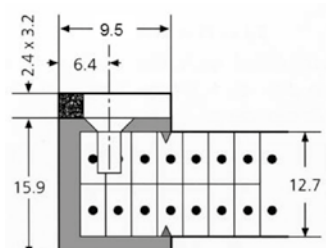
EMC4



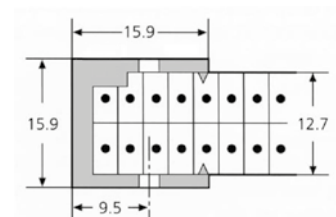
EMC5



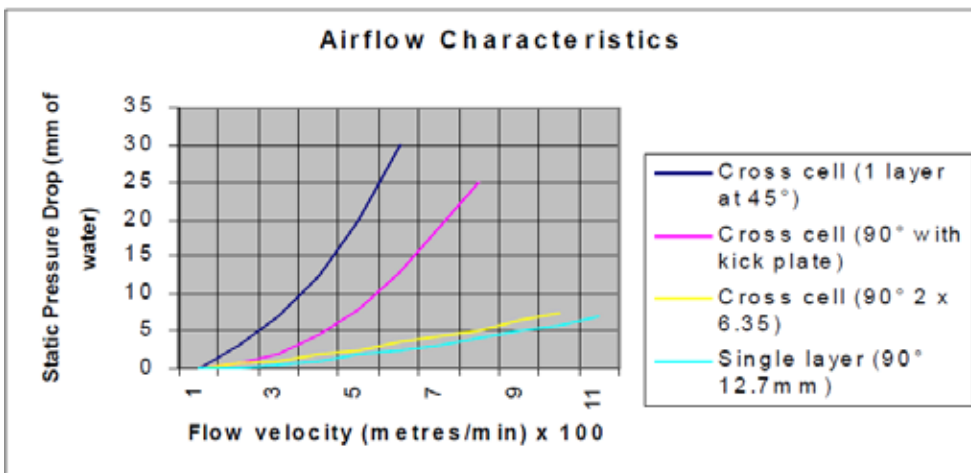
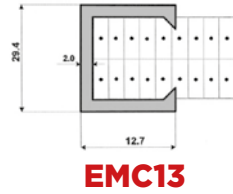
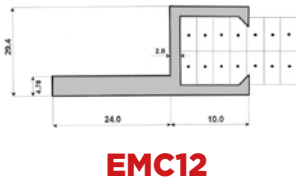
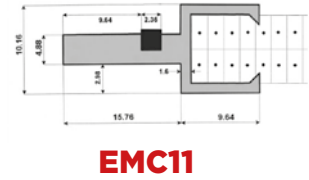
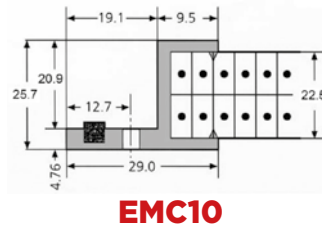
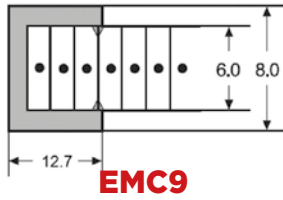
EMC6



EMC7



EMC8



All vents tested to STD285/MIL83528 Spec. Please note figures used are for reference only and should be used for guidance only.

Airflow characteristics applicable to vent types EMC1, EMC2, EMC3 & EMC4.

There are a choice of finishes available:

- Surtec 650
- Alochrom 1200
- Nickel Plating
- Tin Plating
- Painted (Large Choice of Standard Colours available)

For details & information on other types, please contact the factory on +44 (0)1787 460914 or e-mail info@emcemi.com.

Round Vents

EMCEMI manufactures a wide range of circular honeycomb vents. With the same performance and characteristics of our rectangle and square honeycomb vents, we can supply in the following format:

- Aluminium/Steel or Plastic material
- Smallest overall diameter is 50mm and as large as your requirement
- Range of thicknesses from 6.35mm to 50mm thick
- Choice of either EMC or Environmental gaskets or both
- Choice of finishes available



Specification

Material Property	Value
Aluminium Frame	6063-T6
Aluminium Honeycomb	5052 grade
Monel Wire	BS3075 NA13
Neoprene Sponge	Mil-R-6130 Type 11 grade A condition soft
Beryllium Copper	alloy 25 (CA172)
Silicone Rubber	ZZ-R-765 Class 2 Grade 40
Aluminium Wire	5056

How to order

Vent Style	Honeycomb style	
EMC1R	1 - Two Layers (Cris Crossed) @ 6.35mm thick per layer 2 - Single Layer 3 - 30 degree (One layer straight though 2nd layer @ 30 degrees) 4 - 45 degree (One layer straight though 2nd layer @ 45 degrees) 5 - 60 degree (One layer straight though 2nd layer @ 60 degrees)	
Overall Size	Fixings	Fixing type
XXXX-XXXX	XXX	1 - Insert (Capitive) 2 - Through Hole
Finish	Gasket	
1 - Alocrom 1200 2 - Surtec 650 3 - Nickel Plated 4 - Tin Plated 5 - Painted	1 - Knitted Wire Mesh and Neoprene Sponge (EMC/EMI Shield and Environmental IP67)	

For Example: EMC1-I- 2500x2500-15-2-1-2 =
Aluminium Honeycomb Vent – 2 Layers of Honeycomb – 250mm x 250mm square with 15 holes and finished in Alocrom 1200 with a knitted wire mesh and neoprene gasket.

Shielding Effectiveness - Type EMC1R

Frequency	Attenuation	Field
10KHz	45	H
100KHz	49	H
1MHz	51	H
1MHz	>100	E
10MHz	>100	E
100MHz	>100	E
1GHz	98	P
10GHz	95	P

Figures for type EMC1 - 2 layers 6.3mm thick honeycomb, 3.2mm cell size at 90° (cross pole) with Alocrom 1200 finish. 285(modified).



Knitted Wire Mesh

Knitted wire meshes are produced from a single continuous filament and produce very high levels of EMI shielding performance when evenly compressed between two metallic contact surfaces.

Our knitted wire EMI shielding meshes are available in four basic wire types - Monel, Aluminium, TCS (Tinned Copper-clad Steel) and Stainless Steel. Each has its own specific characteristics but TCS is generally regarded as the most suitable for EMP (low frequency) shielding.



How to order

Wire Code

Monel - 1
Aluminium - 2
TCS - 3
Stainless steel - 4

Style

Round - R
Rectangular - REC
Round with Fin - RWF
Twin Round with tail - TRWT

For Example: KWM-2-TRWT-0064-00254 which is Aluminium wire in a twin round with fin profile with a 6.4mm diameter and 25.4mm width

General Specification

Monel	- BS3075 - NA13	(0.11mm diameter)
Aluminium 5056	- AMS 4182	(0.13mm diameter)
TCS	- ASTM B520	(0.11mm diameter)
Stainless Steel	- Alloy 304	(0.11mm diameter)

Available in the following forms:

- Continuous Lengths
- Cut to Length
- Fabricated Gaskets
- Bonding to Carriers such as Silicone, Neoprene or EPDM
- Compressed Mesh O rings

Other sizes available please contact us.

Performance

FREQUENCY	FIELD	MONEL	ALUMINIUM	TCS	S/STEEL
10KHz	H	45	40	60	40
100KHz	H	49	45	65	44
1MHz	H	60	60	85	58
1MHz	E	125	125	125	125
10MHz	E	120	120	120	120
100MHz	E	100	100	108	100
400MHz	P	98	95	99	94
1GHz	P	85	76	78	76
10GHz	P	80	65	62	60



Knitted Wire Mesh over Elastomer Core

We stock and manufacture a wide range of elastomer cores which we can then knit over. Our standard product consists of two layers of either Monel, Aluminium, Stainless Steel or Aluminium. However, we have the ability to knit anything from 1 layer up to 7 layers. If you using this type of gasket where you are shielding against EMP, then we would suggest no less than 7 layers.



Availability:

- O rings
- Continuous Lengths
- Fabricated gaskets
- With or without self-adhesive backing

How to order

Wire Code

Monel - 1
 Aluminium - 2
 TCS - 3
 Stainless steel - 4

Material Code

Neo - Neoprene
 EPDM - EPDM
 SS - Solid Silicone
 SSP - Silicone Sponge
 STUBE - Silicone tube

Style

Round - R
 Rectangular - REC
 Round with Fin - RWF
 Twin Round with tail - TRWT

Number of Layers

1 - 7

Overall OD

From 1mm up to 50mm

For Example: R-1-SS-2-0064 = Round Solid Silicone Profile with two layers of Monel Wire knitted over the core

Performance					
FREQUENCY	FIELD	MONEL	ALUMINIUM	TCS	S/STEEL
10KHz	H	45	40	60	40
100KHz	H	49	45	65	44
1MHz	H	60	60	85	58
1MHz	E	125	125	125	125
10MHz	E	120	120	120	120
100MHz	E	100	100	108	100
400MHz	P	98	95	99	94
1GHz	P	85	76	78	76
10GHz	P	80	65	62	60





SELECT **KNITTED WIRE WITH ENVIRONMENTAL IP CORE**

Knitted Wire Mesh with Environmental IP Carrier

Our KIP product, is a knitted wire mesh bonded to an environmental seal. This type of gasket is generally used on applications where an enclosed door or hatch or similar criteria, where a EMC shield and IP environmental seal is required. Another key area where this gasket excels is where an opening is repeatedly opened and closed. On the environmental part of the gasket self-adhesive backing comes as standard unless otherwise stated. General compression on these types of gaskets 10-15% depending on application. Compression stops can also be fitted to prevent damage to the gasket.



Standard Kitted Wire Mesh & Environmental Gasket Sizes:

2.0 x 2.0	0020-0020
2.4 x 3.2	0024-0020
2.4 x 4.8	0024-0048
2.4 x 6.4	0024-0064
3.2 x 3.2	0032-0032
3.2 x 4.8	0032-0048
3.2 x 6.4	0032-0064
3.2 x 9.5	0032-0095
3.2 x 12.7	0032-0127
4.8 x 4.8	0048-0048
4.8 x 6.4	0048-0064
4.8 x 9.5	0048-0095
6.4 x 6.4	0064-0064
6.4 x 9.5	0064-0095
6.4 x 12.7	0064-0127
1.57 x 12.7	0016-0127
1.57 x 15.9	0016-0159
1.57 x 19.1	0016-0191
2.36 x 12.7	0024-0127
2.36 x 19.1	0024-0191

How to order

Wire Code

Monel - 1
Aluminium - 2
TCS - 3
Stainless steel - 4

Style

Round - R
Round Tube - RT
Rectangular - REC
Round with Fin - RWF

Elastomer Core

Solid Knitted Wire Mesh - 1
Silicone Sponge - 2
Solid Silicone - 3
Silicone Tube - 4
Solid Neoprene - 5
Neoprene Sponge - 6
Neoprene Tube - 7

Environmental Type

Silicone Sponge - 1
Silicone Tube - 2
Solid Silicone - 3
Solid Neoprene - 4
Neoprene Sponge - 5
Neoprene Tube - 6

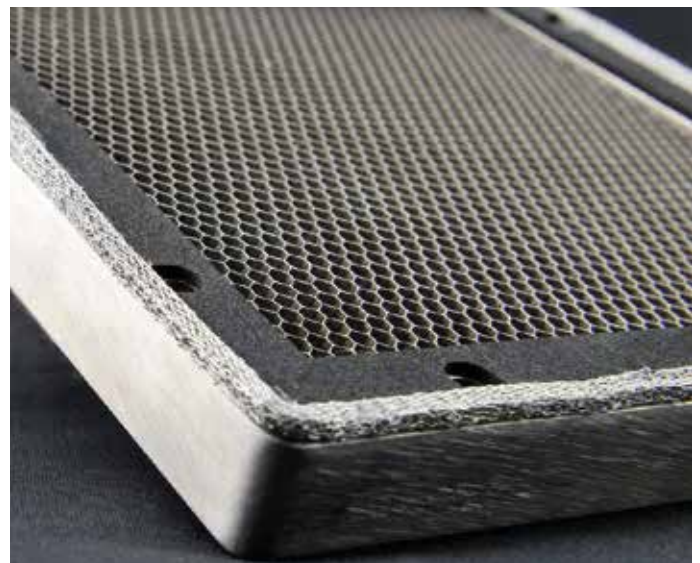
Style

Round - R
Round Tube - RT
Rectangular - REC
Round with Fin - RWF
Twin Round with Fin - TRWF

For Example: KIP-3-1-R-0032-5-REC-0032-0064 represents Standard Solid TCS Knitted Wire Mesh in a round profile form with a diameter of 3.2mm bonded to a Neoprene Sponge Environmental seal with conductive adhesive, 3.2mm thick x 6.4mm wide.

Tolerances:

Wire Mesh: +/- 0.8mm Total
Environmental Gasket: +/- 0.4mm up to 5mm.
Over this: +/- 0.8mm
Total Finished Gasket: +/- 0.8mm up to 300mm.
Over this: +/- 1.2mm
Hole Centres: +/- 0.4mm



Compressed Mesh 'O' Rings

EMCEMI's compressed mesh O rings are designed to use for the following applications:

- Grounding washers/buttons
- Magnetron Seal
- Applications where extreme temperatures are encountered
- DC Grounding required especially when metallic services are involved
- Noise reduction for acoustic noise
- Vibration dampening
- Help prevent shock movements/absorption



We have selected sizes below, but can also make tailored mesh o rings to suit your requirements. With our in house tooling facilities, we can have tooling readily made in super quick time to enable us to fulfil your order in the quickest and most efficient possible time.

Need some technical help or a drawing, please contact us...

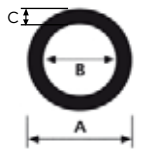
How to order

Width Size Code

- 1 - Monel (BS3075 - NA13)
- 2 - TCS (ASTM B520)
- 3 - Stainless Steel (Alloy 304)
- 4 - Aluminium (AMS 4182)
- 5 - Copper
- 6 - Silver Plated Brass

A selection of our standard sizes are below:

'O' Rings



Dim A (mm):	Dim B (mm):	Dim C (mm):	Part Number:
5.0	2.0	2.0	CMO-X-0050-0020-0020
7.5	5.0	3.0	CMO-X-0075-0050-0030
8.0	6.0	7.0	CMO-X-0080-0060-0070
10.0	4.0	3.5	CMO-X-0100-0040-0035
12.0	8.0	6.0	CMO-X-0120-0080-0060
15.0	6.0	5.0	CMO-X-0150-0060-0050
17.5	12.0	8.0	CMO-X-0175-0100-0080
20.0	6.0	6.0	CMO-X-0200-0060-0060
20.0	12.0	8.0	CMO-X-0200-0120-0080
25.0	6.0	8.0	CMO-X-0250-0060-0080
25.0	12.0	10.0	CMO-X-0250-0120-0100
30.0	6.0	10.0	CMO-X-0300-0060-0100
30.0	12.0	10.0	CMO-X-0300-0120-0100
35.0	6.0	10.0	CMO-X-0350-0060-0100
35.0	12.0	10.0	CMO-X-0350-0120-0100
40.0	6.0	10.0	CMO-X-0400-0060-0100
40.0	12.0	10.0	CMO-X-0400-0120-0100
45.0	6.0	10.0	CMO-X-0450-0060-0100
45.0	12.0	10.0	CMO-X-0450-0120-0100
50.0	6.0	10.0	CMO-X-0500-0060-0100
50.0	12.0	10.0	CMO-X-0500-0120-0100

Copper & Aluminium Conductive Foil Tape

EMCEMI, offered in stock today a wide range of copper and aluminium foil tapes. The tapes have an overall thickness of 0.06mm. The standard role lengths are 33m and are available in stock today. The conductive foil tapes have a wide range of uses, some of which are listed below. If you have any specific questions or custom designs, then please contact our technical team today..



Features:

- Eliminates electrical noise and heat
- Shielding cavities and gaps for EMC
- Slug and Snail barrier applications
- Solderable
- Ground Termination between panels

Options:

- Die cut parts
- Slitting
- Laminating
- Rolls or Cut to Length

How to order

Width Size Code	Material Code
1 - 9mm	1 - Copper
2 - 13mm	2 - Aluminium
3 - 25mm	
4 - 50mm	
5 - 100mm	

For Example: CFT-01-3 = Conductive Foil Tape – Copper – 25mm wide
Other sizes are available so please contact us with your requirements.

Part Number	CFT-	AFT-
Type of Tape	Copper	Aluminium
Total Thickness	0.06mm	0.06mm
Volume Resistivity	0.004 Ohms	0.004 Ohms
Temp Resistance (° C)	-20 +155	-20 +155
Colour	Copper	Silver
RoHS Compliant	Yes	Yes



Copper Fingerstock

Beryllium copper finger stock EMI gaskets have large spring element and superb electrical conductivity. Common areas of use for these gaskets will range from the following:

- Shielded Rooms
- Doors in high footfall fall areas
- Electronic cabinets
- PCB's

We have a vast range in stock for quick delivery and have the capability to supply from a single piece to the full production quantity whenever you need it.



Available in the following forms:

- Rolls
- Standard Strips
- Cut to Length
- Applied to Aluminium Honeycomb Vents
- Clip On
- Stick on

Specification

Chemical Composition

Beryllium	1.80-2.00%
Cobalt plus nickel	0.20% Min
Cobalt plus nickel plus iron	0.6% Max
Copper	Balance

Physical Properties

Electrical conductivity (% IACS)	22-15
Modulus of elasticity (GPa)	127.5

Mechanical Properties

Temper	½HT
Tensile strength (MPa)	1275 Min
Yield strength .2% offset (MPa)	160 Min

Manufacturing Properties

Pitch	±0.127
Length	±1.52
Spring height	±0.51
Cut length	±0.51

Finish

Finger strips are stocked with a clean and bright finish. O2 finish standard.

Other finishes available are:

Solderable unplated	SOL
Clean and Bright (unsolderable)	CB
Gold	G
Silver	SIL
Tin Lead	TL
Bright Tin	BT
Bright Nickel	BN
Zinc/Clear Chromate	Z
Electroless Nickel	EN
Other	

For other requirements and specifications of these finishes, consult us.



Conductive Adhesives

EMCEMI's single part conductive adhesives are available in a wide range of sizes which are listed below. The conductive adhesives are an ideal solution when you require a flexible gasket which is also an environmental seal on things such as PCB's and small electronic equipment when there isn't room for a substantial gasket. These adhesives are single use only, but do are ideal when you only have a 'small land area' available. Shelf life is up to 1 year if kept in the original packaging and stored in a cool dry atmosphere below 18 degrees. If you require other sizes please contact us, and we will be happy to help.



How to order

Size Code

- 1 - 10ml
- 2 - 30ml
- 3 - 55ml
- 4 - 100ml
- 5 - 170ml
- 6 - 250ml
- 7 - 310ml
- 8 - 500ml

Material Code

- 1 - Silicone Nickel Graphite (SNG)
- 2 - Silicone Nickel (SN)
- 3 - Silicone Silver Glass (SSG)
- 4 - Silicone Silver Aluminium (SSA)
- 5 - Silicone Silver Copper (SSC)
- 6 - Pure Silver

For Example: CA-1-5 = Silicone Nickel Graphite RTV in a 170ml cartridge.
Other sizes are available so please contact us with your requirements.

Features:

- Electrically Conductive
- Available in 10, 30, 55, 170 and 310ml sizes
- Thixopaste - One Part No Mixing Required
- Non Corrosive
- Excellent Adhesion to various substrates
- Safety and Handling information available, please contact for further details

Part Number	CA-1	CA-3	CA-2	CA-4	CA-5	CA-6
Conductive Filler	Nickel Graphite	Silver Glass	Silver Nickel	Silver Aluminum	Silver Copper	Pure Silver
Specific Gravity	2.29	1.82	3.58	1.86	3.58	4.2
Consistency	Thick Paste	Thick Paste	Thick Paste	Thick Paste	Thick Paste	Thick Paste
Lap Shear Strength Minimum (PSI)	150	120	120	175	200	225
Operating Temp Range (°C)	-48 204	-48 204	-48 204	-48 204	-48 204	-48 204
Skin Over (Min)	15	15	15	15	15	15
Tack Free (Min)	90	90	90	90	90	90
Cure for Handling	12-24 hrs	12-24 hrs	12-24 hrs	12-24 hrs	12-24 hrs	12-24 hrs
Full Cure	72-144 hrs	72-144 hrs	72-144 hrs	72-144 hrs	72-144 hrs	72-144 hrs
Color	Dark Gray	Light Tan	Tan	Tan/Blue	Dark Tan	Tan
Durometer Shore A	65	70	75	68	70	65
Tensile Strength PSI (Min)	540	415	285	260	285	280
Elongation % (Min)	210	100	150	155	150	165
Tear Strength #/in (Min)	90	52	50	45	50	54
Volume Resistivity	0.06	0.01	0.008	0.01	0.008	0.005

Shielded Windows

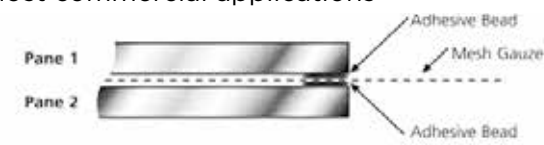
Fully laminated windows in glass or plastic can be produced either as individual windows or, for smaller size, in sheet form and machined into segments. All fully laminated windows are available with or without a step and with or without a silver painted busbar. Surface treatments for scratch resistance or anti reflectance are available and tinted inter-layers for anti reflectance or contrast enhancement can be supplied on request.

Standard terminations for individually produced windows are flying mesh, foil or silver painted busbar or conductive gasket. Sheet-cut windows, including stepped types, are only available with silver busbar and optional gaskets. Care should be taken with stepped windows, particularly glass ones, as the pressure extended by the gasket under compression can easily overstress even a fully laminated window. We suggested that stepped windows should be plastic or a composite where the glass pane is not under pressure when mounted.

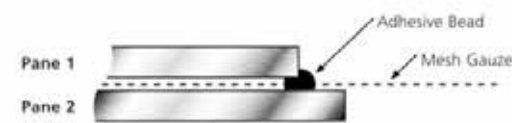
Most gaskets in our range can be used with shielded windows and the actual type selected will depend on the degree of shielding and environmental protection required. Please contact us for technical advice.

Edge Bonded Windows

Edge bonded windows use the same substrates and mesh as the fully laminated windows but are laminated around their edges, outside the 'viewing area', only and are lower cost. They are not as suitable for stepped construction but if the windows are relatively small or when the viewing area remains smaller than the smallest of the two pieces (i.e. bezel mounted where the edge remains covered albeit stepped) it is not a major problem. Standard edge bonded windows are a cost-effective solution for most commercial applications



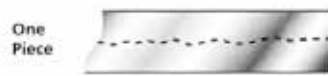
BASIC CONSTRUCTION: EDGE BONDED - Square Edge



BASIC CONSTRUCTION: EDGE BONDED - Stepped Edge

Cast Plastic Windows

Cast windows are formed by encapsulating the mesh within a thermo-setting plastic or resin substrate. The process has advantages inherent to the manufacturing technique, such as surface finishes, tints, minimum thickness and physical strength. The process necessitates a silver busbar termination although a stepped construction is possible during the machining of the cast blank. Cast windows cost more than edge laminated ones but are more robust for specialist applications.

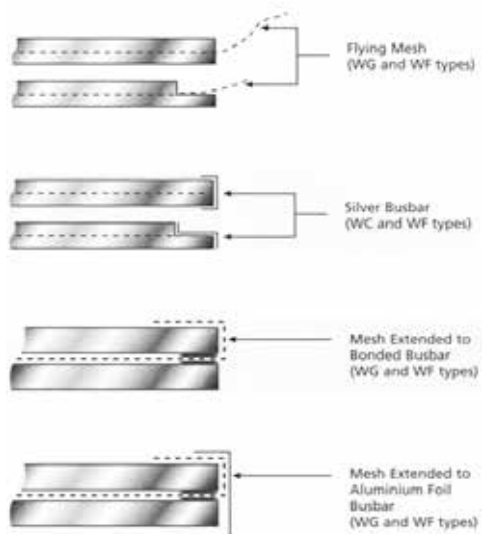


BASIC CONSTRUCTION: CAST WINDOWS - Integral Mesh

Gasket Options

1. Flying mesh windows generally bound both the window and the flying mesh to a convenient point on the equipment. However, the window and/or the mesh can be fitted with most gasket types. The mesh can be wrapped around a sponge material and clipped into position
2. Silver busbar windows can be supplied with gaskets made from oriented wires in silicone, knitted mesh or conductively loaded silicone.
3. Extended mesh options (with or without foil busbar) are readily fitted with various forms of gaskets such as knitted mesh, conductive fabric or oriented wires in silicone

TERMINATION METHODS



Glazing Media

Glass, including clear, diffused and toughened.

Polycarbonate, including clear, hard-faced, anti-reflective, tinted, polarised and filtered.

Polycarbonate can also be conductively coated with ITO (Indium Tin Oxide) but this is a restricted option as a minor scratch on ITO can dramatically reduce its shielding effectiveness.

Mesh Media

Woven copper (which can be anti-reflective treated) or stainless steel mesh. Typically 100 OPI.

Other wire types including knitted meshes, finishes and OPI configurations are available to order - minimum quantities apply, please contact us for more information.

Tolerances

Glass Thickness	± 0.5mm
Overall dimensions	± 1.0mm to 300mm ± 1.5mm to 600mm
Plastics Thickness	± 0.5mm per piece
Overall dimensions	± 1.0mm to 300mm ± 1.5mm to 600mm

Tolerances

Shielding effectiveness in dB, typical values tested in accordance with MIL-STD-285 with test samples of woven copper mesh 300 x 300mm

It is important to note that a smaller test sample would return a far higher attenuation and all manufacturers data should be compared on this basis to avoid misinterpretation.

Frequency	Field	100 OPI	50 OPI
10 KHz	H	20	15
100 KHz	H	40	35
1 MHz	H	50	45
1 MHz	E	>100	>100
10 MHz	E	>100	>100
100 MHz	E	80	75
1 GHz	P	60	55
10 GHz	P	30	20

Window Meshes

We also supply Woven Copper and Stainless Steel meshes for customers to make their own screens. Untreated (non-blackened) mesh material available pre-cut although it is advisable to order this by the linear metre to avoid handling and fraying problems. Blackened copper mesh can be pre-cut and packed in bulk or single sheets for ease of handling.

Material types available

Copper and Stainless Steel.

Material Width

Normally 1200mm which we will confirm at time of order.

Openings per inch (OPI)

Standard = 100

Special = 50, 70 and 145 (minimum order applies)

Wire diameters

.051 and .025mm

How to order

Generally by description, stating wire type, finish, size and tolerances if cut pieces.



Conductive Sponge Material

EMCEMI's own conductive sponge material is made of a conductive polyurethane sponge with a conductive fabric bonded to each face. It is available in 1.5mm, 2.5mm & 3.5mm thicknesses. The material also has the option of being supplied with or without a conductive adhesive backing. The material is highly conductive in the X,Y & Z axis with a typical resistance of less than 1 Ohm.



The material is available in sheet form or in die cut or fabricated gaskets, depending on your requirements.



How to order

Part Number:

CS-15-XXXX-XXXX-X
CS-25-XXXX-XXXX-X
CS-35-XXXX-XXXX-X

XXXX-XXXX = Size in MM

CS = Conductive Sponge
15 = 1.5mm thick
25 = 2.5mm thick
35 = 3.5mm thick

1 = S/A backing
2 = No S/A Backing

Tolerance = +/- 0.3mm

Shielding Performance

Frequency	Attenuation
10KHz	>60
100MHz	>60
400MHz	>60
1GHz	>60
3GHz	>60

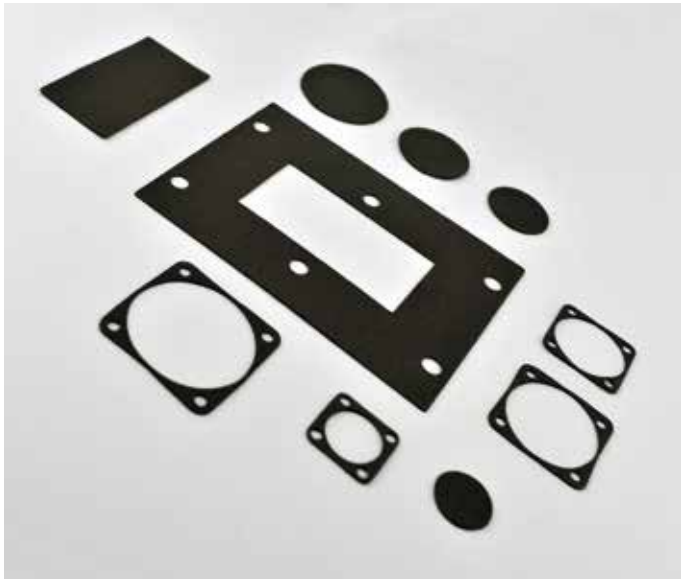
Specification

Material Property	Value
Thickness	1.0 - 3.5mm
Width	up to 1200mm
Availability	Sheet form or cut gaskets
Temperature Range	-40 to +70°C
Decomposing Temp	200°C
Self-Igniting Temp	>250°C
Colour	Grey
Surface Resistivity	<0.2Ω ²
Metal Adhesion	Good



Neoprene Sponge

Neoprene has good resistance to heat, moderate chemicals & oils, sea water, acids, fats, greases, many solvents & ozone. It also has good flame retardant properties available in both Sponge and Solid forms. Here at EMCEMI, we manufacture and stock a wide range of grades and thickness to suit your requirements with the option of self-adhesive backing, we can fulfil your needs in rapid time.



Available in the following forms:

- Extrusions
- Sheet
- Self Adhesive Backed
- Single Piece Gaskets
- Fabricated Gaskets
- Bonded to Knitted Wire Mesh (EMC and Environmental Seal)

Available in the following thickness:

0.5mm	3.0mm
0.8mm	3.2mm
1.0mm	4.0mm
1.4mm	4.8mm
1.6mm	6.4mm
1.8mm	7.5mm
2.0mm	8.0mm
2.4mm	9.5mm
2.6mm	12.7mm
2.8mm	

General Specification

Density average	120±30 kg/m ³
Hardness	40 IRHD base number
Compression Set	10% (23°C at 50% compression for 24 hours) maximum
Temperature Range	-34°C to 80°C continuous or 100°C intermittent
Fire Resistance	Self-extinguishing MVSS-302
Elongation at break	150%
Water Absorption by weight	5%
Compression Deflection at 25%	35-63 kPa
Tensile Strength	450 kN/m ²
Colour	Black





Silicone

We offer both options of Silicone Sponge and Solid Silicone in stock for immediate delivery. We also offer a wide range of colours to suit every need. We also offer Fluorosilicone but these is manufactured to order. Please contact us with your requirement today.



Available in the following forms:

- Extrusions
- Sheet
- Self-Adhesive Backed
- Single Piece Gaskets
- Fabricated Gaskets
- Bonded to Knitted Wire Mesh
(EMC and Environmental Seal)
- Waterjet Cut

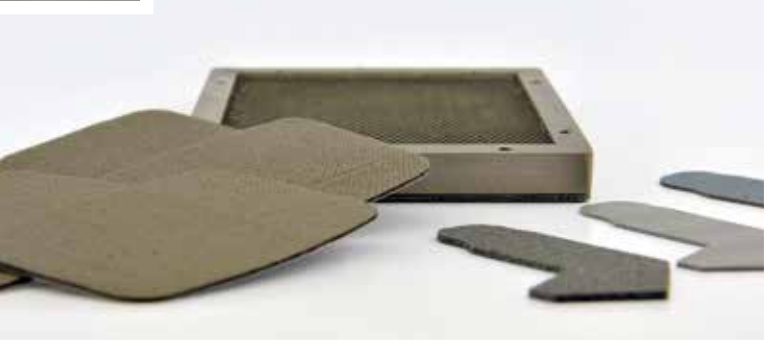
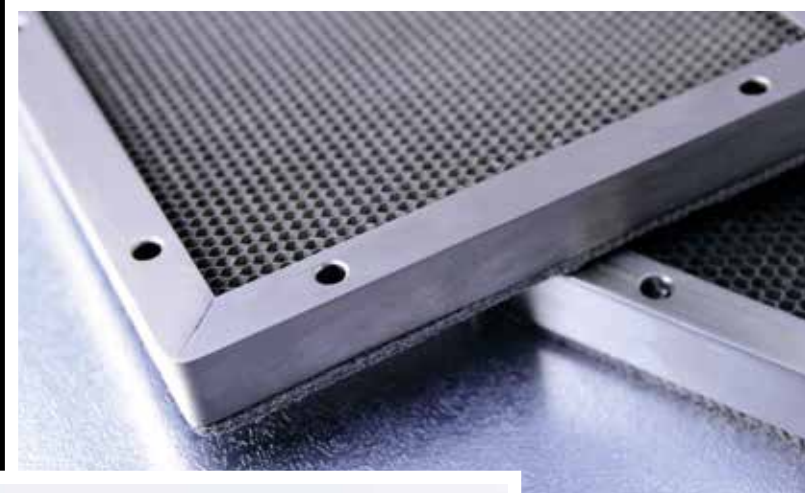
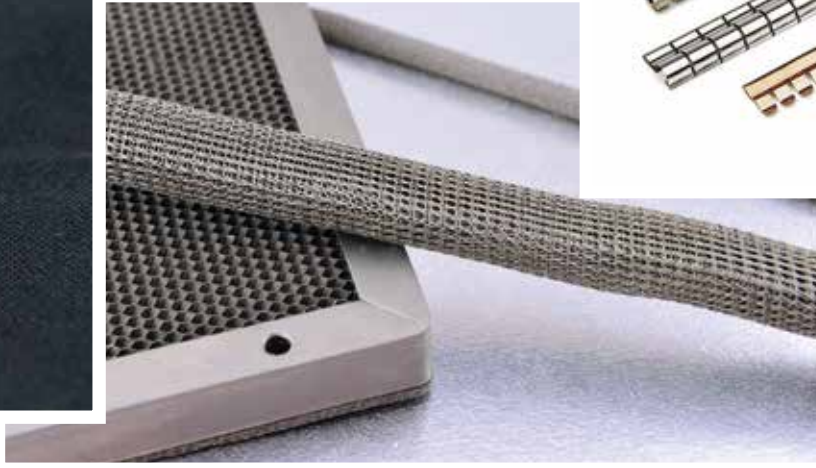
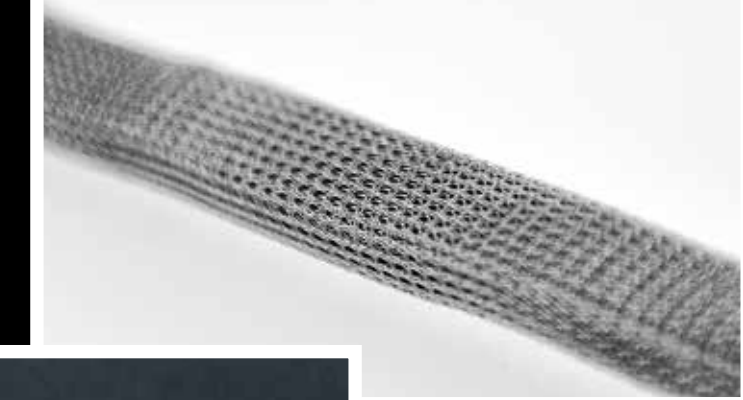
Available in the following thickness:

0.5mm	3.0mm
0.8mm	3.2mm
1.0mm	4.0mm
1.4mm	4.8mm
1.6mm	6.4mm
1.8mm	7.5mm
2.0mm	8.0mm
2.4mm	9.5mm
2.6mm	12.7mm
2.8mm	

General Specification

Density average	120±30 kg/m ³
Hardness	40 IRHD base number
Compression Set	10% (23°C at 50% compression for 24 hours) maximum
Temperature Range	-34°C to 80°C continuous or 100°C intermittent
Fire Resistance	Self-extinguishing MVSS-302
Elongation at break	150%
Water Absorption by weight	5%
Compression Deflection at 25%	35-63 kPa
Tensile Strength	450 kN/m ²
Colour	Black







emcemi

YOUR SHIELDING SOLUTION SPECIALIST

emcemi

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WHERE WE ARE

