

# Mesh Over Elastomer Core Gaskets



## Description:

Knitex<sup>®</sup> mesh over elastomer core EMI shielding gaskets are produced by knitting mesh covers over a central elastomer core. A single cover of mesh is sufficient where only a moderate degree of shielding effectiveness is required but a double cover is recommended for higher levels of attenuation. More layers of mesh can be added if required but there are only limited benefits for more than two layers. KnitMesh produces mesh covered elastomer gaskets in a wide range of cover materials and there are a number of core materials available including neoprene sponge, silicone sponge, silicone tube and EPDM.

## Application

Mesh covered elastomer gaskets are used extensively on electronic enclosures where there is a seam unevenness and where low closure forces are required. The compliant central core takes up these gaps and ensures excellent continuity between the mating surfaces. Because the central core does not allow a compression set they are particularly useful where panels and doors are frequently opened or assembled and disassembled. Suitable for fixing by groove mounting where they are held in place by sidewall friction, by means of adhesive spots or for some rectangular sections where a double sided tape can be fixed to the gasket itself. The best shielding effectiveness is achieved when the gasket is compressed by 25% to 35% of its nominal height. It should be noted that dimensions given in the product tables below are for the elastomer only and that approximately 0.44mm should be added for each mesh layer.

## Materials of Construction - Wires

Knitex EMI shielding materials can be manufactured from any metal that can be drawn into a filament. However the majority of shielding requirements can be satisfied by using the materials listed in the table below:

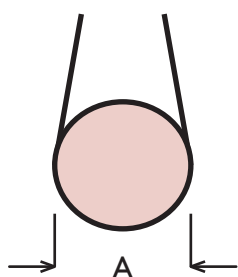
Material	Wire Diameter	Material Ref.
Monel (BS 3075-NA13)	0.11mm	MO
Tin Plated Copper Clad Steel (SN-FE-CU)	0.11mm	SN-FE-CU
Stainless Steel (AISI 304)	0.11mm	SS
Tinned Copper (BS 4109 with 0.7-1 micron tin plate)	0.11mm	TC
Silver Clad Copper (BS 4190 with 0.7-1 micron silver cladding)	0.12mm	SCC
Nickel Plated Copper	0.15mm	NI-CU
Aluminium (ALMG5)	0.14mm	AL
Copper (BS 4109)	0.12mm	CO

Other materials are available to special order such as Phosphor Bronze and Brass.

## Materials of Construction - Elastomer

Material	Temperature Range	Colour
Neoprene Sponge	-30°C to +100°C	Black
Silicone Sponge	-60°C to +200°C	Cream
Silicone Tube	-60°C to +260°C	Grey
EPDM	-40°C to 100°C	Black

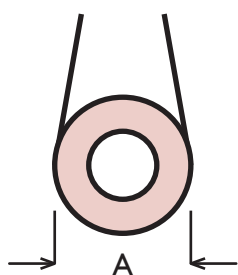
### Circular Section Neoprene / Silicone / EPDM



Core Diameter A (mm)	Part Number Silicone Sponge	Part Number Neoprene Sponge	Part Number EPDM
2	8801	8967	-
3	8802	9000	8976
4	8803	8968	8977
5	8804	8969	8978
6	8805	8970	8979
8	8806	8971	8980
10	8807	8972	8981
11	8808	8973	8982
13	8809	8974	8983
19	8810	8975	8984

General tolerances on gasket dimensions +/- 0.8mm. Further details on application.  
Core dimensions specified do not include thickness of mesh layers.

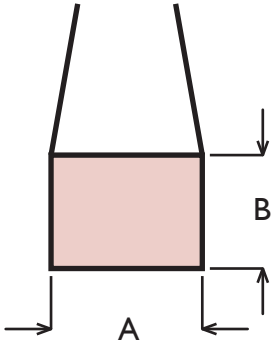
### Circular Section Silicone Tube



Tube O.D. A (mm)	Tube I.D. (mm)	Part Number Silicone Tube
1.6	1	1 / 8187
2	1.5	1 / 8201
3	1.5	8508
4	1.5	8509
5	3	8507
6	3	8506
8	5	8504
10	6	8502
11	8	8512
13	10	8510
14	11	8500

General tolerances on gasket dimensions +/- 0.8mm. Further details on application.  
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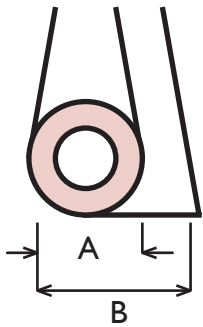
Rectangular Section  
Neoprene / Silicone



Core Width A (mm)	Core Thickness B (mm)	Part Number Neoprene Sponge	Part Number Silicone Sponge
3	3	8851	8870
4	3	8852	8871
5	3	8853	8872
6	3	8854	8873
5	5	8855	8874
6	6	8856	8875
9	6	8857	8876
12	6	8858	8877
13	6	8859	8878
16	6	8860	8879
12	9	8861	8880
15	9	8862	8881
13	10	8863	8882
13	13	8864	8883
19	13	8865	8884

General tolerances on gasket dimensions +/- 0.8mm. Further details on application.  
Core dimensions specified do not include thickness of mesh layers.

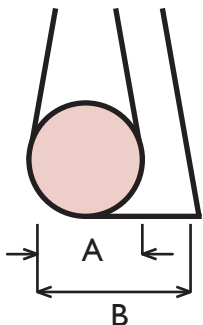
'P' Section Silicone Tube



Tube O.D. A (mm)	Tube I.D. (mm)	Overall Width B (mm)	Part Number	Tube O.D. A (mm)	Tube I.D. (mm)	Overall Width B (mm)	Part Number
3	1.5	7.5	8113	5	3	19	8959
3	1.5	13	8951	6	3	16	8960
3	1.5	16	8952	6	3	19	8961
3	1.5	19	8953	6	3	25	8962
4	1.5	13	8954	6	3	28	8209
4	1.5	16	8955	8	5	16	8963
4	1.5	19	8956	8	5	19	8964
5	3	13	8957	8	5	25	8965
5	3	16	8958	10	6	19	8966
5	3	15.5	8117	10	6	18	8145

General tolerances on gasket dimensions +/- 0.8mm. Further details on application.  
Core dimensions specified do not include thickness of mesh layers.

'P' Section Silicone Sponge



Core Diameter A (mm)	Width B (mm)	Part Number Silicone	Core Diameter A (mm)	Width B (mm)	Part Number Silicone
3	13	8901	5	19	8906
3	16	8902	6	15	8907
3	19	8903	6	19	8908
5	13	8904	6	25	8909
5	16	8905	13	25	8910

General tolerances on gasket dimensions +/- 0.8mm. Further details on application.  
Core dimensions specified do not include thickness of mesh layers.

# Knitted Wire Gaskets Mesh Over Elastomer Core Gaskets

# Knitex®

## Additional Information

Samples are available generally free of charge (please contact the sales department). Delivery lead times are quantity dependant but emergency deliveries can often be organised within a few days or less. Other core materials and profiles, shapes and sizes are available to special order. Please contact the KnitMesh sales department for further information.

## Ordering

To order, simply state the quantity required, part number, material reference and if you have any special roll length or packaging requirements. Also specify if a double side tape is required which is only available on rectangular shaped gaskets. Cut to length and fabricated picture frame type gaskets are also available for which a drawing may be required.

Example of how to order a standard Knitex gasket:

**Gasket Type 8856 / SN-FE-CU** = a 6mm x 6mm neoprene sponge with a single cover of tin plated copper clad steel.

**Gasket Type 8500 / SS / Double Cover** = a 14mm O.D. x 11mm I.D. silicone tube with a double cover of stainless steel.

## Quality Assurance

KnitMesh Technologies® is accredited to:

ISO9001:2008, ISO14001:2004, OHSAS18001:2007, PAS 99:2006 and ISO/TS 16949:2009



## Customer Support

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