

All-Metal Compressed Wire Mesh Gaskets



Knitex® all metal EMI shielding compressed gaskets are constructed from knitted wire mesh to produce a seamless gasket normally having a rectangular or round cross section. They are made by die-compressing a given amount of mesh and consequently it is possible to produce gaskets in a wide range of sizes and densities. The most common shape is a ring but gaskets are also formed in a rectangle and with special shapes incorporating bolt location holes, mounting recesses, corner radii and other special features as required.



Application

Compressed gaskets are used to shield applications in microwave ovens, CCTV, wave-guides, connectors and shaft seals. Because of their all-metal construction they are also extremely good heat conductors, resilient to high temperatures and shock absorption and are therefore suitable in severe environmental conditions. They are not however recommended for situations where joints are frequently opened or if an environmental seal is required.

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

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

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Shielding Effectiveness

Knitex compressed gaskets in optimum conditions will provide excellent shielding effectiveness, typical figures shown below:

Material	H-Field 100kHz	E-Field 10MHz
Monel (BS 3075-NA13)	60 dB	120 dB
Tin Plated Copper Clad Steel (SN-FE-CU)	70 dB	130 dB

It should be noted that these figures can only be a guide as each application is unique and the shielding effectiveness of the gasket should be considered as part of the system as a whole.

Additional Information

Samples are available generally free of charge (please contact the sales department). Delivery lead times are quantity dependant but emergency deliveries can be organised from stock or within a few days.

Ordering

Knitex has a vast range of existing dies that will suit many applications thus avoiding tooling charges. However, where a suitable size does not already exist, tooling charges are not expensive and compressed gaskets can be very cost-effective even if quite low quantities are required.

When ordering, please specify the outside diameter (O.D.), inside diameter (I.D.), thickness and material. For more complex shapes provide a drawing detailing all dimensions including location and size of holes and corner radii if required.

Please contact the sales department for more information.

Quality Assurance

KnitMesh Technologies® is accredited to:
ISO9001:2008, ISO14001:2004, OHSAS18001:2007, PAS
99:2006 and ISO/TS 16949:2009



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