

Product Overview

A composite of metal wire mesh impregnated with an elastomer, creating a highly conductive and resilient gasketing material for EMI/RFI shielding and environmental sealing applications.

Choose from:

- Woven aluminium wire, expanded aluminium or expanded Monel sheet, impregnated with an elastomer filler – Silicone, fluorosilicone or synthetic rubber or;
- Expanded Monel sheet without elastomer filler.

The conductive metallic surfaces of the material provide an excellent low resistance contact whilst under the correctly designed conditions the rubber component ensures effective dust and moisture sealing.

The exposed metallic points on the woven product, where the weave of the wire overlaps, create approximately 80 contacts per cm² whilst the raised edge on the expanded sheet product creates approximately 20 contacts per cm².

Applications

Provides an economic approach to gasketing flat surfaces where unevenness does not exceed 0.10mm and/or where material thickness constraints occur.

Particularly suited to small thin gaskets such as MIL type connectors etc. Other thin gaskets can be made in-house using specialist cutting methods and the material can also be supplied as continuous sheet for customer's own production purposes.

Fluorosilicone versions are suitable for applications where fuels/oils/hydraulic fluids and other contaminants are present.

Availability

Can be supplied as:

- Continuous roll, 305mm wide, in 0.5mm and 0.8mm thickness (see specification).
- Standard connectors.
- Bespoke gaskets made to customer's specification.

Design Considerations

- These materials are not suitable for joining or fabricating. Gaskets are only available as a single part.
- Gasket size is limited to 300mm in width with minimal constraints on length.
- Minimum material width should not be less than 2.5mm in any part of the gasket. If this cannot be achieved around fixing holes, consider using a slot.
- As these materials are of a solid nature they give very little compression and should therefore be used between ridged flat surfaces with a combined flatness tolerance of 0.1mm maximum. Compression limiting stops are therefore not normally required with these materials.
- Self-adhesive backing is not recommended.

Production Capability

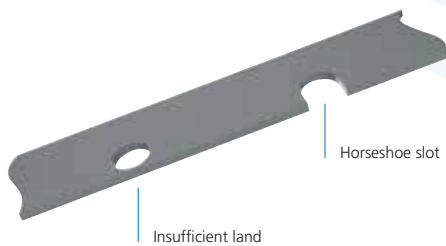
Kemtron holds large stocks of raw materials which, together with our in-house facilities using precision laser cut rule dies, enables us to produce bespoke gaskets economically and on time, whether for prototype, short and medium production runs or for commercial quantities.

Minimum Land



2.5mm Land are (or thickness of material if over 2mm)

Horse Shoe Slot



Insufficient land

Horseshoe slot

Typical Shielding Performance

	200 KHz	100 MHz	1 GHz	EMP Survive
Expanded Monel (unfilled) 530/560	60 dB	90 dB	70 dB	Yes
Woven Aluminium (silicones) 525/525F	65 dB	90 dB	75 dB	Yes

Manufacturing Tolerances

- Hole centres $\pm 0.4\text{mm}$
- Length $\pm 0.8\text{mm}$
- Thickness $\pm 0.13\text{mm}$

Material tolerances on woven aluminium mesh
 28 ± 4 wires per 2.54 cm^2

Handling considerations

Care should be taken when handling this material as any exposed metal points may scratch unprotected skin.

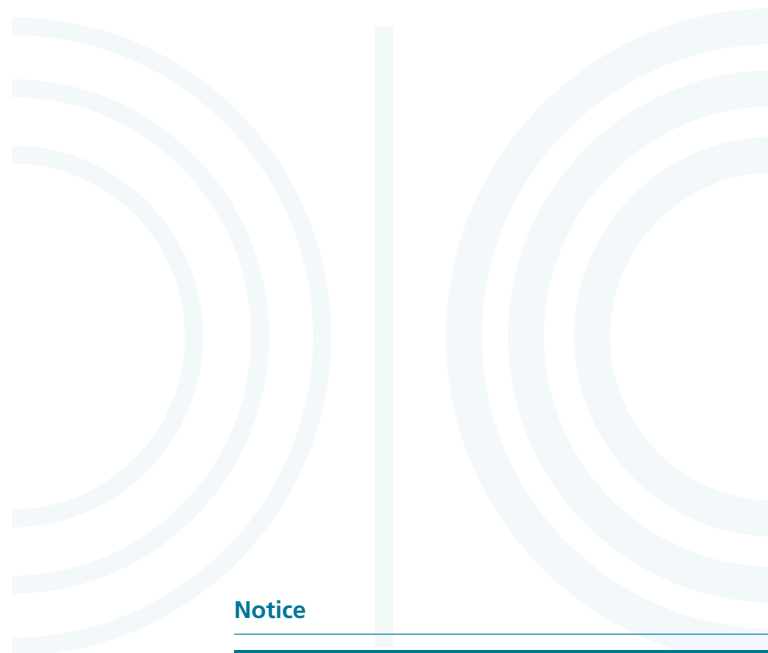
Specifications

Part No.	Material Type	Thickness	Sheet width
515	Woven Aluminium in Synthetic	0.5mm	305mm
525	Woven Aluminium in Silicone	0.5mm	305mm
525F	Woven Aluminium in Fluorosilicone	0.5mm	305mm
565	Expanded Monel in Silicone	0.5mm	305mm
535	Expanded Monel in Silicone	0.8mm	305mm
560	Expanded Monel Unfilled	0.5mm	305mm
530	Expanded Monel Unfilled	0.8mm	305mm
555	Expanded Aluminium in Silicone	0.5mm	305mm
545	Expanded Aluminium in Silicone	0.8mm	305mm

Material Specifications

Wire	
Expanded Monel	QQ-N-281B
Expanded Aluminium	QQ-A-250
Woven Aluminium	AMS 4182

Elastomers	Specification	Temp Range	Colour
Silicone	ZZ-R-765 Class2 GR50	-60°C to 200°C	Grey
Fluorosilicone	MIL-R-25988	-55°C to 200°C	Blue
Synthetic	AMS 3222C	-40°C to 200°C	Black



Notice

Information supplied in these data sheets is based on independent and laboratory tests which Kemtron believes to be reliable. Kemtron has no control over the design of customer's product which incorporates Kemtron's products, therefore it is the responsibility of the user to determine the suitability for his particular application and we recommend that the user make his own test to determine suitability.

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