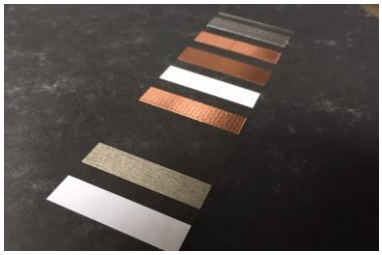
+44 (0)1706 758811

EMI Shielding Tapes & Absorbers

Copper Tapes
Aluminium Tapes
Fabric Tapes
Flexible Absorbers
Nearfield Absorbers
Wireless Power Charger Absorbers



Fothershield
UNIT 3 GORRELLS WAY, TRANSPENNINE TRADING ESTATE,
ROCHDALE, LANCS, UK. OL11 2PX
E info@fothershield.co.uk
T +44 (0)1706 758811
W www.fothershield.co.uk

Fothershield's high quality technical tapes have been developed for a range of applications in the electronics industry including industrial electronics, avionics, telecommunications, and consumer electronics.

CONTENTS PAGE

COPPER AND ALUMINIUM FOIL TAPES

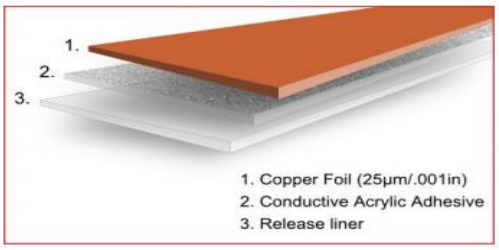
Fothershield's foil tapes provide an economical solution for EMI shielding in a variety of uses. The conductive adhesive ensures good electrical contact with the surface. Copper and aluminium tapes reflect and absorb within the frequency range from 200KHz to over 1GHz, but are not effective below 200KHz (magnetic field).

Different widths are available, but typical widths offered are 12mm, 19mm, 25mm and 50mm width. Standard roll length 33m.

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

COPPER TAPE

FS-720A Copper Foil with Conductive Acrylic Adhesive



Product Description

- Copper foil with conductive acrylic pressure sensitive adhesive made up of a uniform dispersion of conductive particles, plus release liner.

Construction

- Copper foil (25µm/.001in)
- Conductive Acrylic Adhesive
- Release Liner
-

Specification

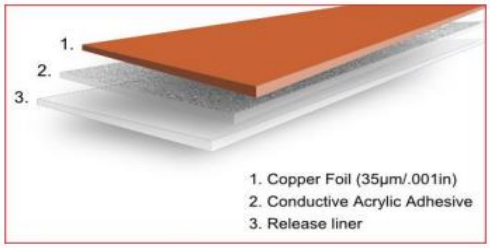
Item	Unit		Specification	
Total Thickness	µm	inch	65	.003
Peel Strength	g/in	LB/inch	700 +/- 5	1.6
Temperature Resistance	°C	°F	-30 to +130	-22 to +266
Electrical Resistance	Ω.cm	Ω.inch	10^{-1} to 10^{-3}	.25 to .003

Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Binding the end of knitted wire mesh of shielding cables
- Corrosion resistant ground contact points
- Elimination of electrical noise and heat
- Electrostatic discharge (ESD) shielding
- EMR/RFI shielding
- Slug and snail barrier applications

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

FS-740 Copper Foil with Conductive Acrylic Adhesive



Product Description

- Copper foil with conductive acrylic pressure sensitive adhesive made up of a uniform dispersion of conductive nickel silver particles, plus release liner.

Construction

- Copper foil (35µm/.001in)
- Conductive Acrylic Adhesive
- Release Liner

Specification

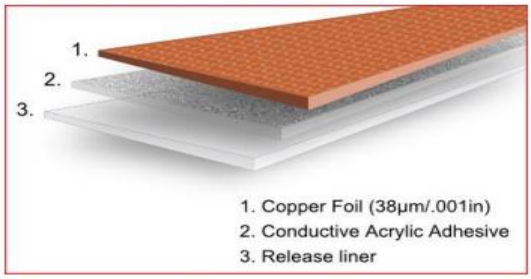
Item	Unit		Specification	
Total Thickness	µm	inch	65	.003
Peel Strength	g/in	LB/inch	700 +/- 5	1.6
Temperature Resistance	°C	°F	-30 to +130	-22 to +266
Electrical Resistance	Ω.cm	Ω.inch	10^{-1} to 10^{-3}	.25 to .003

Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Binding the end of knitted wire mesh of shielding cables
- Corrosion resistant ground contact points
- Elimination of electrical noise and heat
- Electrostatic discharge (ESD) shielding
- EMR/RFI shielding
- Slug and snail barrier applications

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

FS-938A Embossed Copper Foil with Conductive Acrylic Adhesive



Product Description

- Embossed Copper foil with conductive acrylic pressure sensitive adhesive, plus release liner. Heat and cold resistant.

Construction

- Copper foil (38µm/.001in)
- Conductive Acrylic Adhesive
- Release Liner

Specification

Item	Unit		Specification	
Total Thickness	µm	inch	95	.004
Peel Strength	g/in	LB/inch	900	1.98
Temperature Resistance	°C	°F	-30 to +130	-22 to +266
Electrical Resistance	Ω.cm	Ω.inch	0.5	-
Elongation	%	-	8	-

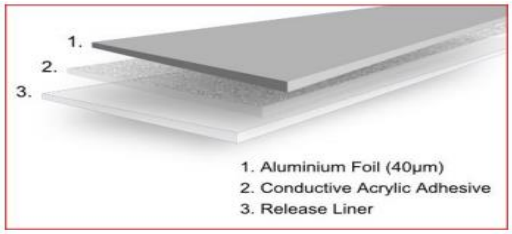
Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Binding the end of knitted wire mesh of shielding cables
- Corrosion resistant ground contact points
- Elimination of electrical noise and heat
- Electrostatic discharge (ESD) shielding
- EMR/RFI shielding
- Slug and snail barrier applications

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

ALUMINIUM TAPE

FS-710 Aluminium Foil with Conductive Acrylic Adhesive



Product Description

- Aluminium foil with conductive acrylic pressure sensitive adhesive, plus release liner.

Construction

- Aluminium foil (40µm/.001in)
- Conductive Acrylic Adhesive
- Release Liner

Specification

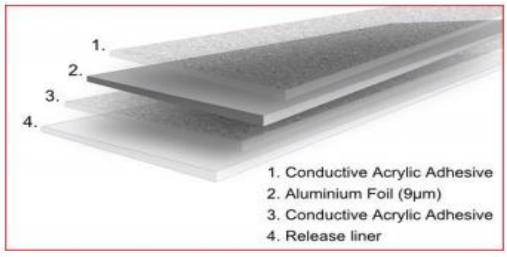
Item	Unit		Specification	
Total Thickness	µm	inch	85	.003
Peel Strength	g/in	LB/inch	750	1.7
Temperature Resistance	°C	°F	-30 to +130	-22 to +266
Electrical Resistance	Ω.cm	Ω.inch	10^{-1} to 10^{-3}	.25 to .003

Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Repair of shielding signal cable or FCC
- Binding the end of knitted wire mesh of shielding cables
- EMR/RFI shielding

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

FS-750 Aluminium Foil with Double Sided Conductive Acrylic Adhesive



Product Description

- Aluminium foil with double sided conductive acrylic pressure sensitive adhesive, plus release liner.

Construction

- Conductive Acrylic Adhesive
- Aluminium foil (9µm)
- Conductive Acrylic Adhesive
- Release Liner

Specification

Item	Unit		Specification	
Total Thickness	µm	inch	115 +/- 5	.0005
Peel Strength - Inner	g/in	LB/inch	700	1.6
Peel Strength - Outer	g/in	Lb/inch	650	1.5
Temperature Resistance	°C	°F	-30 to +130	-22 to +266
Electrical Resistance	Ω.cm	Ω.inch	10^{-1} to 10^{-3}	.25 to .003

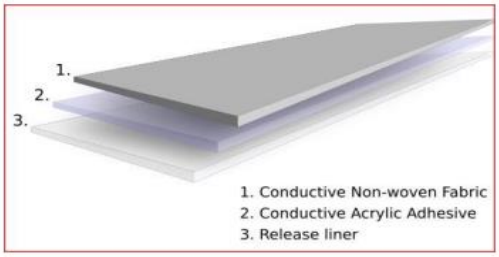
Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Repair of shielding signal cable or FCC
- Binding the end of knitted wire mesh of shielding cables
- EMR/RFI shielding

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

METALLISED NON WOVEN FABRIC TAPES

FS-340 Conductive Metallised Non-Woven Fabric Tape



Product Description

- Conductive metallised non-woven fabric tape with single sided conductive acrylic pressure sensitive adhesive, plus release liner.

Construction

- Conductive non-woven fabric
- Conductive Acrylic Adhesive
- Release Liner

Specification

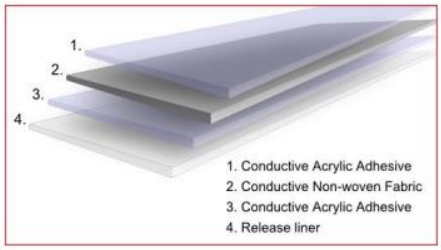
Item	Unit	Specification	Test Method
Thickness	µm	Backing 35 Total 40 +/- 5	KSA 1107
Peel Strength	g/25mm	1500	KSA 1107 SUS 304
Heat Resistance (Holding Power)	°C	150	110°C/500g Heating Dry Oven
Electrical Resistance	Ω.in²	0.1↓	HIOK 3540 1Kg Pressure

Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI Shielding for cables by wrapping the tape around the cable (overlap recommended)
- Binding the end of knitted wire mesh of shielding cables
- EMI/RFI shielding
- Suitable for Die-Cutting
- Conforms in curved, uneven surfaces

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

FS-350 Conductive Metallised Non-Woven Fabric Tape



Product Description

- Conductive metallised non-woven fabric tape with double coated conductive acrylic pressure sensitive adhesive, plus release liner.

Construction

- Conductive Acrylic Adhesive
- Conductive non-woven fabric
- Conductive Acrylic Adhesive
- Release Liner

Specification

Item	Unit	Specification	Test Method
Thickness	µm	Backing 35 Total 50 +/-5	KSA 1107
Peel Strength	g/25mm	1100	KSA 1107 SUS 304
Heat Resistance (Holding Power)	°C	Good	110°C/500g Heating Dry Oven
Electrical Resistance	Ω.in²	0.05↓	HIOK 3540 1Kg Pressure

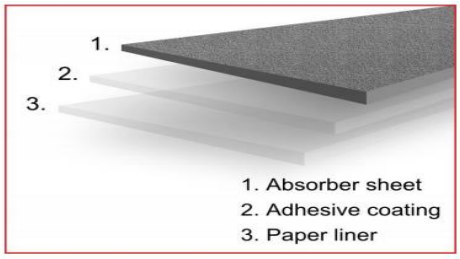
Typical Uses

- Providing electrical conductivity in the seams of EMI shielded rooms and enclosures
- EMI shielding for cables by wrapping the tape around the cable (overlap recommended)
- Binding the end of knitted wire mesh of shielding cables
- EMR/RFI shielding
- Suitable for Die-Cutting
- Conforms in curved, uneven surfaces

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

FLEXIBLE ABSORBER SHEET

FS-400SH Flexible Absorber Sheet



Product Description

- Iron (Fe) plus four other synthesised metals in a flake format which is then layered and calendered with special resin
- Demonstrates magnetic, conductive and thermal properties
- Absorbs EMI and RFI in the broadband range, converting the waves into heat
- RoHS compliant, Halogen free

Construction

- Flexible Absorbing Material
- Adhesive Coating
- Release Liner

Specification

Item	Unit	Specification
Thickness	µm	500
Permeability (at 1 MHz)	µ	28
Temperature Range	°C	-25 to 125
Specific Gravity	g/cm³	2.8 +/- 0.3
Tensile Strength	Kg/cm²	>100
Surface Electrical Resistance (mm)	Ω	1 x 10^7
Thermal Conductivity	W/mK	0.8 +/- 0.1
Elongation	%	≥60

Typical Uses

- Wide range of applications where EMI RFI prevention is required such as between PCBs and in metal cabinets
- Improves antenna performance, data flex performance, high speed communication and increases signal integrity

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

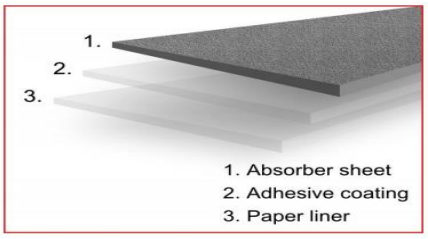
- Very low reflection of incidence waves as the electromagnetic energy is absorbed and turned to heat
- Available in sheet form, or can be die-cut to customer's requirements

NEAR FIELD COMMUNICATIONS

With the increase in use of smart phones with near field communication systems, there is a need for increased performance and distance of communication.

- Reducing interference in the 13.56 MHz frequency band to short range, wireless communications for e-payments are improved between the mobile device and the terminal in the vicinity of the antenna coil.
- The absorbers high permeability concentrates electromagnetic waves and prevents interference between loop antenna and metal parts
- The operating distance between the antenna and the RF-ID reader is increased

FS-400SP Near Field Communication Flexible Absorber Sheet



Product Description

- Iron (Fe) plus four other synthesised metals in a flake format which is then layered and calendered with special resin
- Demonstrates magnetic, conductive and thermal properties
- Absorbs EMI and RFI in the broadband range, converting the waves into heat
- RoHS compliant, Halogen free

Construction

- Flexible Absorbing Material
- Adhesive Coating
- Release Liner

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

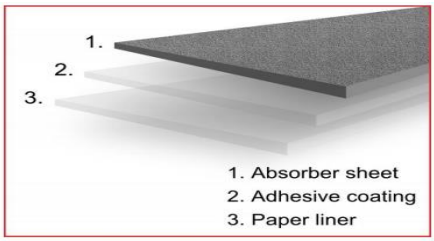
Specification

Item	Unit	Specification
Thickness	µm	500
Permeability (at 1 MHz)	µ	28
Temperature Range	°C	-25 to 125
Specific Gravity	g/cm³	2.8 +/- 0.3
Tensile Strength	Kg/cm²	>100
Surface Electrical Resistance (mm)	Ω	1 x 10^7
Thermal Conductivity	W/mK	0.8 +/- 0.1
Elongation	%	≥60

Typical Uses

- Wide range of applications where EMI RFI prevention is required such as between PCBs and in metal cabinets
- Improves antenna performance, data flex performance, high speed communication and increases signal integrity
- Very low reflection of incidence waves as the electromagnetic energy is absorbed and turned to heat
- Available in sheet form, or can be die-cut to customer's requirements

FS-500SC Near Field Communication Flexible Absorber Sheet



Product Description

- Iron (Fe) plus four other synthesised metals in a flake format which is then layered and calendered with special resin
- Demonstrates magnetic, conductive and thermal properties
- Designed for NFC Near Field Communication
- High Permeability
- Allows for wireless communication in the 13.56 MHz frequency band
- Absorbs EMI and RFI in the broadband range, converting the waves into heat
- RoHS compliant, Halogen free

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

Construction

- Flexible Absorbing Material
- Adhesive Coating
- Release Liner

Specification

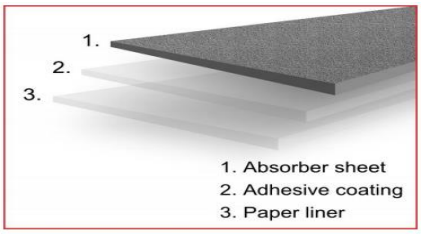
Item	Unit	Specification
Thickness	µm	100
Permeability (at 1 MHz)	µ	100
Temperature Range	°C	-25 to 125
Specific Gravity	g/cm^3	3.3 +/- 0.3
Tensile Strength	Kg/cm^2	>100
Surface Electrical Resistance (mm)	Ω	1×10^8
Thermal Conductivity	W/mK	0.8 +/- 0.1
Elongation	%	≥60

Typical Uses

- Short distance wireless communication from smartphone
- Wide range of applications where EMI RFI prevention is required such as between PCBs and in metal cabinets
- Improves antenna performance, data flex performance, high speed communication and increases signal integrity
- Very low reflection of incidence waves as the electromagnetic energy is absorbed and turned to heat
- Available in sheet form, or can be die-cut to customer's requirements

WIRELESS POWER CHARGER FLEXIBLE ABSORBER SHEET

FS-600WP Wireless Power Charger Flexible Absorber Sheet



Product Description

- Designed for WPC Wireless Power Charge
- The magnetic sheet improves wireless charging efficiency to 65% with electromagnetic induction on the receiver and the item being charged

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

- RoHS compliant, Halogen free

Construction

- Flexible Absorbing Material
- Adhesive Coating
- Release Liner

Specification

Item	Unit	Specification
Thickness	µm	250
Permeability (at 1 MHz)	µ	48
Temperature Range	°C	-25 to 125
Specific Gravity	g/cm³	3.7 +/- 0.3
Tensile Strength	Kg/cm²	>100
Surface Electrical Resistance (mm)	Ω	1 x 10^8
Thermal Conductivity	W/mK	0.8 +/- 0.1
Elongation	%	≥60

Typical Uses

- Offering the ability to power on electronic devices without the use or wires providing a convenient solution for users of mobile devices
- Available in sheet form, or can be die-cut to customer's requirements

How to Order

Part Number	Width Size Code	Material
FS-720A	01 – 12mm	Copper Tape 25µm
FS-740	02 - 19mm	Copper Tape 35µm
FS-938A	03 – 25mm	Copper Tape 38µm embossed
FS-710	04 – 50mm	Aluminium Tape 40µm
FS-750	05 – Please specify width	Aluminium Tape 9µm Double adhesive tape
FS-340		Conductive Metallised Non-Woven Fabric Tape 35µm
FS-350		Conductive Metallised Non-Woven Fabric Tape Double adhesive tape 35µm
FS-400SH	500µm	EMI RFI Absorber Sheet
FS-500SC	100µm	Nearfield Absorber Sheet
FS-600WP	250µm	Wireless Power Charger

For example: FS-720A-04 = FS-720A (Copper Foil Tape 25µm) 04 = 50mm width
Other widths available on request.

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk

NOTES

When applying EMI tapes to any surface it is important to ensure that the surface is free from all contaminants such as oil, grease, powder, dust or release agents. Tapes should be fully tested on the substrates in the application they are intended for. Adhesive performance should be checked when using substrates containing plasticisers. It is the customer's responsibility to decide on the tapes suitability for the intended application. Unless stated, all values are average.

APPLICATION INSTRUCTIONS

- Ensure that all surfaces to be bonded are clean and free from dust and grease
- The surface to be bonded should be dry, and free from loose particles
- The best cleaning medium is solvent such as Isopropyl alcohol applied with a clean cloth
- For optimum bonding sufficient pressure should be applied to the surface area to be bonded
- The adhesive is pressure sensitive. Best results are achieved with maximum surface contact under pressure
- Avoid load bearing to the bond directly after application
- Recommended application temperature +20°C to +36°C
- Minimum application temperature should not be below +10°C

Sales: +44 (0)1706 758811
Email: info@fothershield.co.uk
www.fothershield.co.uk