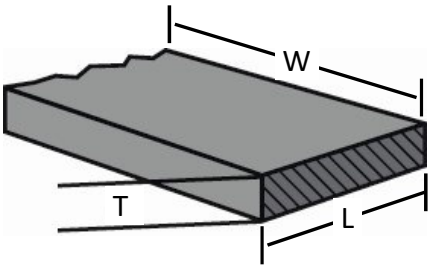
CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES carbon

Silicone / Fluorosilicone sheet material is loaded with a variety of highly conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing.

Carbon offers the best cost/performance ratio and temperature resistance and is mainly used for static discharge.

- **Filler material: Carbon (C)**
- **Customer-specific thicknesses and sheet sizes available**
- **Very good elasticity**
- **Good heat resistance**
- **Excellent physical properties**



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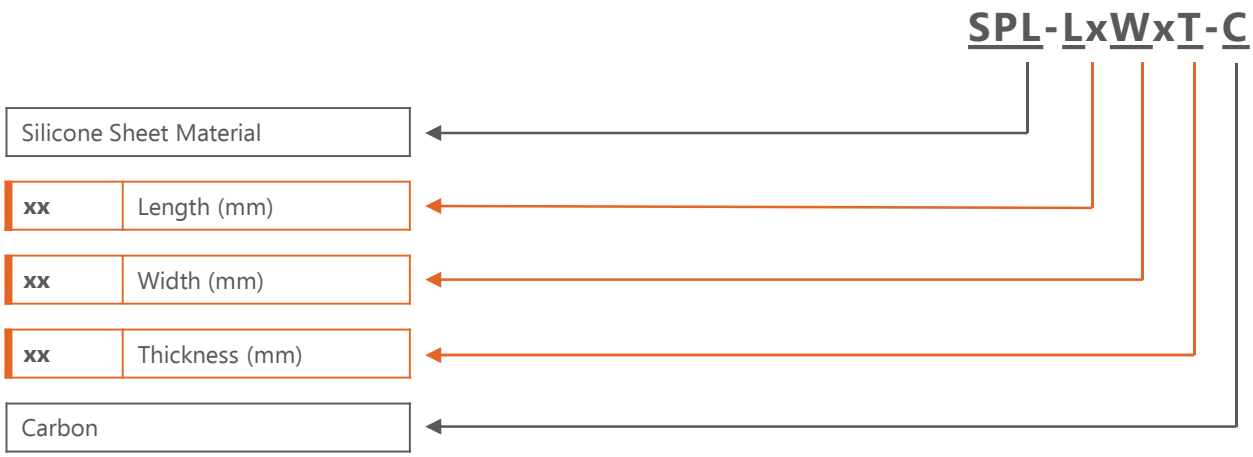
PRODUCT SPECIFICATIONS

PROPERTY	VALUE / TOLERANCE	TEST METHOD
Conductive filler material	Carbon (C)	-
Basic material	Silicone	-
Hardness	60 – 70 Shore A	ASTM D2240
Volume resistivity	9,0 Ω-cm	ASTM D4935
Elongation	290 %	ASTM D412
Specific gravity	1,3 g/cm^3 ± 0,2	ASTM D792
Tensile strength	6 MPa	ASTM D412
Operating temperature	-55 – 200 °C	-
Colour	Black	-
Standard sheet sizes (LxW)	300x210 mm	-
Thickness range (T)	1,0 – 10,0 mm	-

BUILDING AN ITEM NUMBER



Standard options

EXAMPLE

SPL-300x210x1,6-C
Silicone sheet material; sheet size: 300x210; thickness: 1,6 mm; filler material: carbon

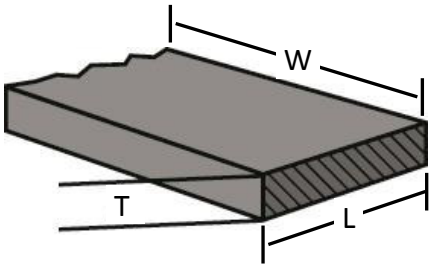
CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES nickel plated graphite

Silicone / Fluorosilicone sheet material is loaded with a variety of highly conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing.

It is recommended to use fluorosilicone as elastomer if the conductive elastomer should be resistant against aggressive substances like fuel oils and kerosene.

Nickel plated graphite is a high quality cost effective material with increased use in the military market.

- Filler material: Nickel plated graphite (NIC)
- Conductive filler ensures galvanic compatability
- Wide range of standard thicknesses; customer-specific thicknesses and sheet sizes available
- Low contact resistance between mating surfaces
- Fluorosilicone for harsh environments: fuel oils and solvents



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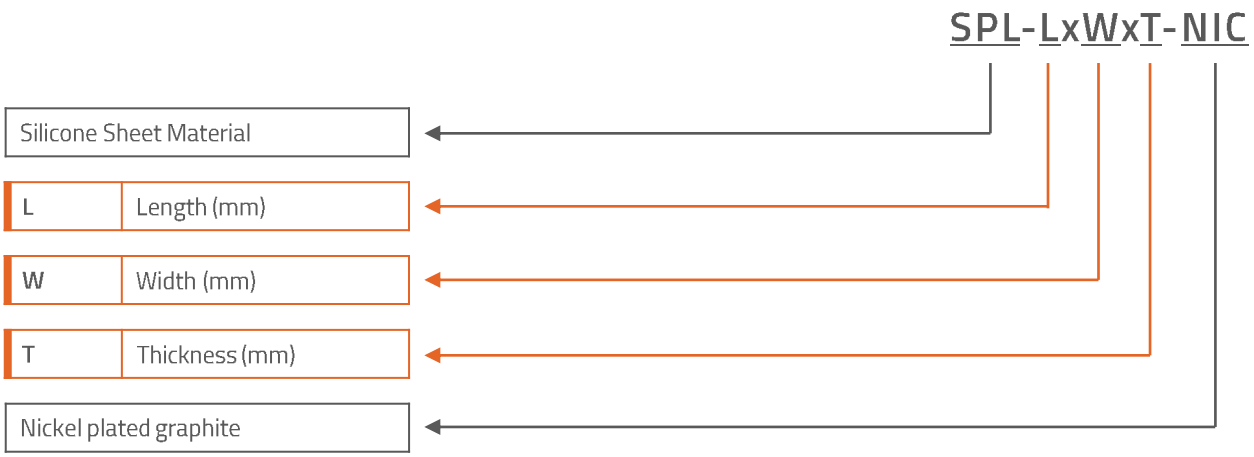
PRODUCT SPECIFICATIONS

PROPERTY	VALUE / TOLERANCE		TEST METHOD
Conductive filler material	Nickel plated graphite (NIC)		-
Basic material	Silicone	Fluorosilicone	-
Hardness	60 Shore A ± 7	65 Shore A ± 7	ASTM D2240
Volume resistivity	0,05 Ω-cm	0,05 Ω-cm	MIL-DTL 83528 C
Elongation (min)	150 %	150 %	ASTM D412
Tear strength	8,75 N/mm	7,0 N/mm	ASTM D624
Specific gravity	2,0 g/cm³ ± 13 %	2,2 g/cm³ ± 13 %	ASTM D792
Compression set	25,0 % (70h @ 100°C)	30,0 % (70h @ 100°C)	ASTM D395
Tensile strength (min)	1,38 MPa	1,38 MPa	ASTM D412
Operating temperature	-55 – 160 °C	-55 – 160 °C	-
Colour	Dark grey	Dark green	-
Standard sheet sizes (LxW)	150x150 / 250x300 / 300x300 mm		-
Thickness range (T)	0,5 – 3,2 mm		-

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES nickel plated graphite

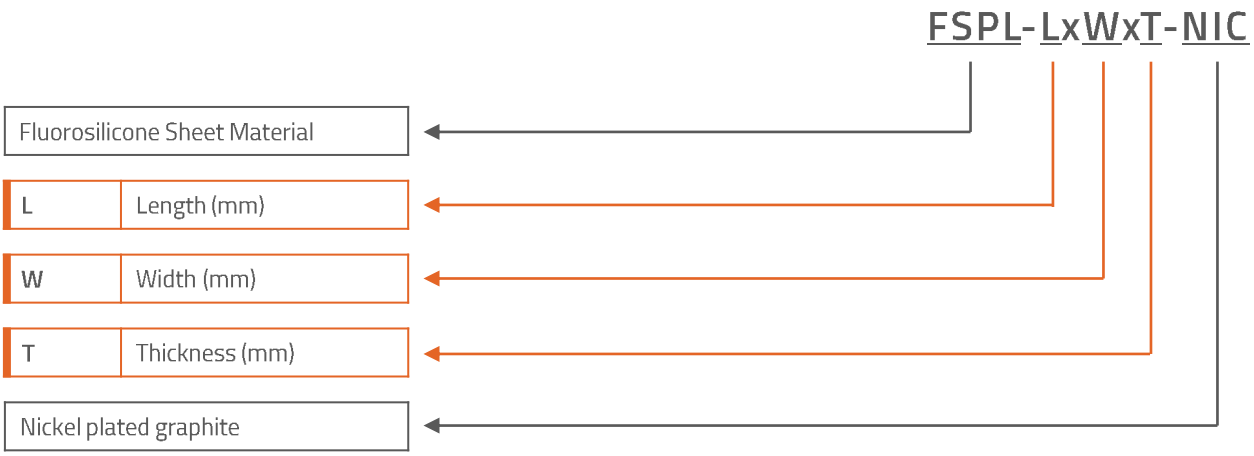
BUILDING AN ITEM NUMBER



Standard options

EXAMPLE

SPL-150x150x1,6-NIC
Silicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: nickel plated graphite



Standard options

EXAMPLE

FSPL-150x150x1,6-NIC
Fluorosilicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: nickel plated graphite

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES nickel plated graphite

THICKNESSES AVAILABLE (mm)

0,5 | 0,8
1,0 | 1,2 | 1,5 | 1,6 | 1,8
2,0 | 2,5
3,0 | 3,2

TOLERANCES

SHEET SIZE (mm)		TOLERANCE (mm)
Thickness	<2,0	± 0,15
	>2,0	± 0,25
Length / width		± 0,8

SELF ADHESIVE BACKING

Our silicone sheet material can be supplied with a conductive or non-conductive adhesive. This adhesive has a shelf life of six months and is intended as an assembly aid only.

Self adhesive backing is not recommended for use with fluorosilicone sheets.

SHIELDING EFFECTIVENESS (according to MIL-DTL 83528 C)

	SILICONE	FLUOROSILICONE
20 MHz	106 dB	106 dB
40 MHz	105 dB	105 dB
60 MHz	106 dB	105 dB
80 MHz	114 dB	110 dB
100 MHz	111 dB	108 dB
200 MHz	116 dB	114 dB
400 MHz	119 dB	116 dB
600 MHz	112 dB	106 dB
800 MHz	114 dB	116 dB

	SILICONE	FLUOROSILICONE
1 GHz	118 dB	108 dB
2 GHz	111 dB	100 dB
4 GHz	100 dB	104 dB
6 GHz	104 dB	104 dB
8 GHz	110 dB	106 dB
10 GHz	110 dB	105 dB

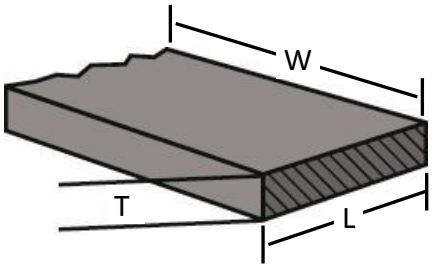
CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated glass

Silicone / Fluorosilicone sheet material is loaded with a variety of highly conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing.

It is recommended to use fluorosilicone as elastomer if the conductive elastomer should be resistant against aggressive substances like fuel oils and kerosene.

Silver plated glass is made of a mixture of high-performance silicone and glass silver particles.

- Filler material: Silver plated glass (AGGL)
- Conductive filler ensures galvanic compatability
- Wide range of standard thicknesses; customer-specific thicknesses and sheet sizes available
- Low contact resistance between mating surfaces
- Fluorosilicone for harsh environments: fuel oils and solvents



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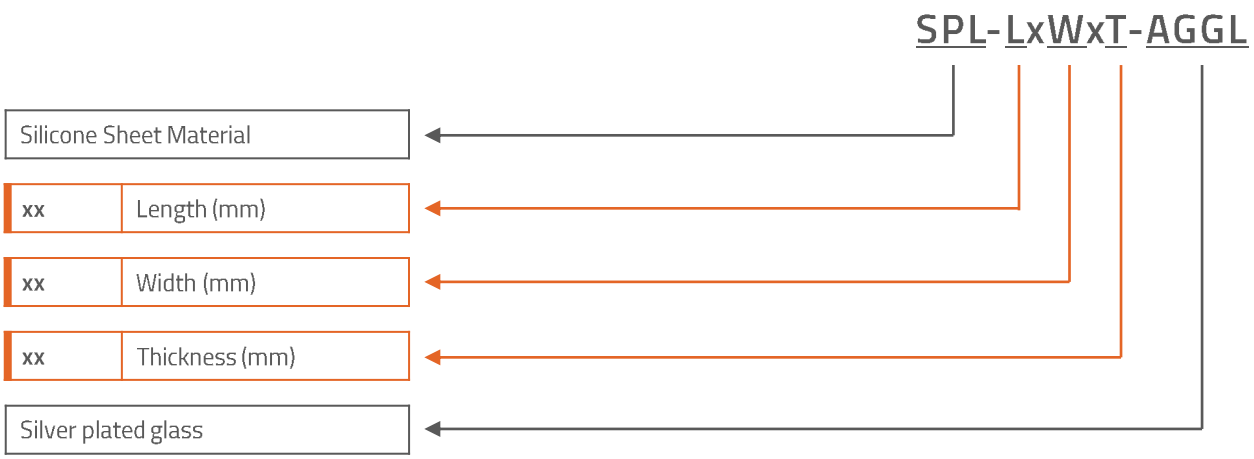
PRODUCT SPECIFICATIONS

PROPERTY	VALUE / TOLERANCE		TEST METHOD
Conductive filler material	Silver plated glass (AGGL)		-
Basic material	Silicone	Fluorosilicone	-
Hardness	70 Shore A ± 5	75 Shore A ± 7	ASTM D2240
Volume resistivity	≤ 0,01 Ω-cm	< 0,015 Ω-cm	MIL-83528
Volume resistivity after aging test	≤ 0,01 Ω-cm	< 0,015 Ω-cm	MIL-83528
Elongation at break	> 75 %	> 60 %	ASTM D412
Density	1,8 g/cm³ ± 0,25	2,0 g/cm³ ± 0,2	ASTM D792
Tensile strength	> 1,03 MPa	> 1,24 MPa	ASTM D412
Operating temperature	-65 – 160 °C	-55 – 160 °C	MIL-83528
Shielding effectiveness	> 80 dB	> 50 dB	MIL-83528
Standard sheet sizes (LxW)	200x200 / 250x250 / 250x380 / 300x300 mm		-
Thickness range (T)	0,5 – 2,0 mm		-

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated glass

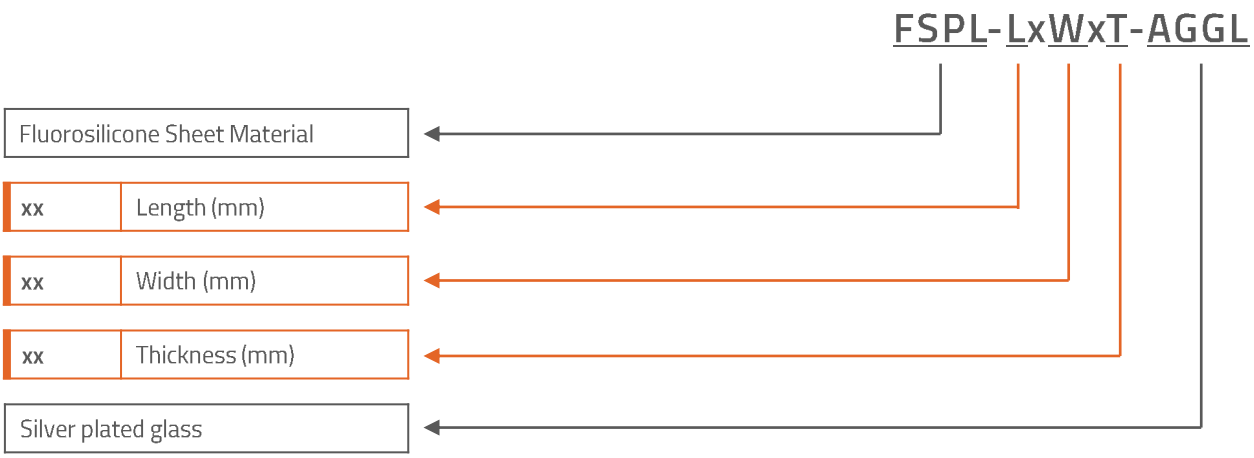
BUILDING AN ITEM NUMBER



Standard options

EXAMPLE

SPL-150x150x1,6-AGGL
Silicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated glass



Standard options

EXAMPLE

FSPL-150x150x1,6-AGGL
Fluorosilicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated glass

TOLERANCES

SHEET SIZE (mm)		TOLERANCE (mm)
Thickness	<2,0	± 0,15
Length / width		± 0,8

SELF ADHESIVE BACKING

Our silicone sheet material can be supplied with a conductive or non-conductive adhesive. This adhesive has a shelf life of six months and is intended as an assembly aid only.

Self adhesive backing is not recommended for use with fluorosilicone sheets.

SHIELDING EFFECTIVENESS (according to GJB 6190-2008)

	SILICONE	FLUOROSILICONE
200 KHz	81 dB	50 dB
100 MHz	106 dB	90 dB
500 MHz	105 dB	90 dB
2 GHz	110 dB	90 dB
10 GHz	82 dB	90 dB

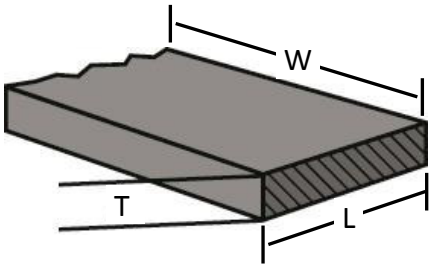
CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated copper

Silicone / Fluorosilicone sheet material is loaded with a variety of highly conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing.

It is recommended to use fluorosilicone as elastomer if the conductive elastomer should be resistant against aggressive substances like fuel oils and kerosene.

Silver plated copper offers excellent RFI/EMI shielding performance across the frequency spectrum.

- Filler material: Silver plated copper (AGCU)
- Conductive filler ensures galvanic compatability
- Wide range of standard thicknesses; customer-specific thicknesses and sheet sizes available
- Low contact resistance between mating surfaces
- Fluorosilicone for harsh environments: fuel oils and solvents



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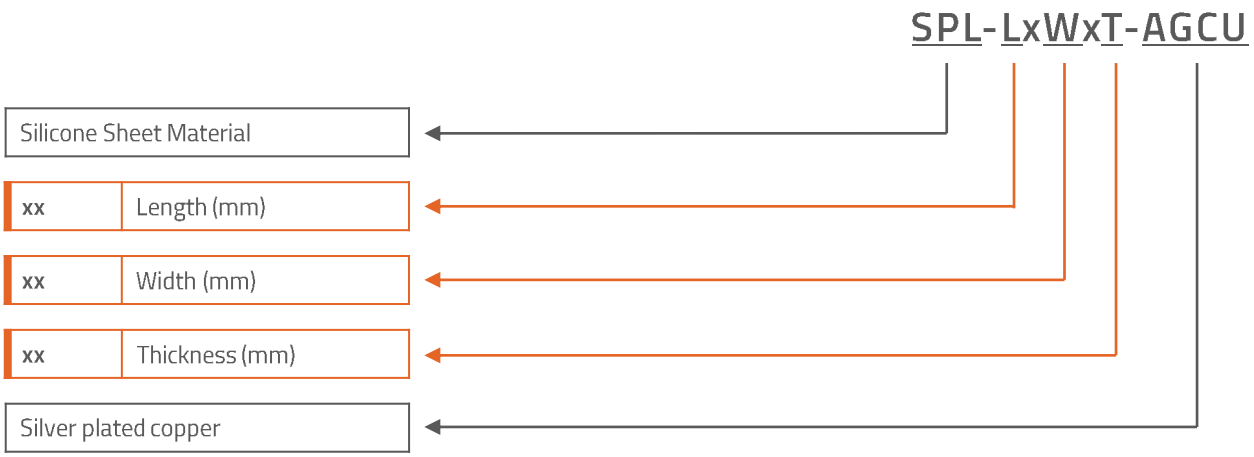
PRODUCT SPECIFICATIONS

PROPERTY	VALUE / TOLERANCE		TEST METHOD
Conductive filler material	Silver plated copper (AGCU)		-
Basic material	Silicone	Fluorosilicone	-
Hardness	65 Shore A ± 7	65 Shore A ± 7	ASTM D2240
Volume resistivity	0,004 Ω-cm	0,01 Ω-cm	MIL-DTL 83528 C
Elongation (min)	100 %	100 %	ASTM D412
Tear strength	4,4 N/mm	6,1 N/mm	ASTM D624
Specific gravity	3,5 g/cm³ ± 13 %	4,0 g/cm³ ± 13 %	ASTM D792
Compression set	32,0 % (70h @ 100°C)	35,0 % (70h @ 100°C)	ASTM D395
Tensile strength (min)	1,38 MPa	1,24 MPa	ASTM D412
Operating temperature	-55 – 125 °C	-55 – 125 °C	-
Colour	Tan	Green	-
Standard sheet sizes (LxW)	150x150 / 250x300 / 300x300 mm		-
Thickness range (T)	0,5 – 3,2 mm		-

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated copper

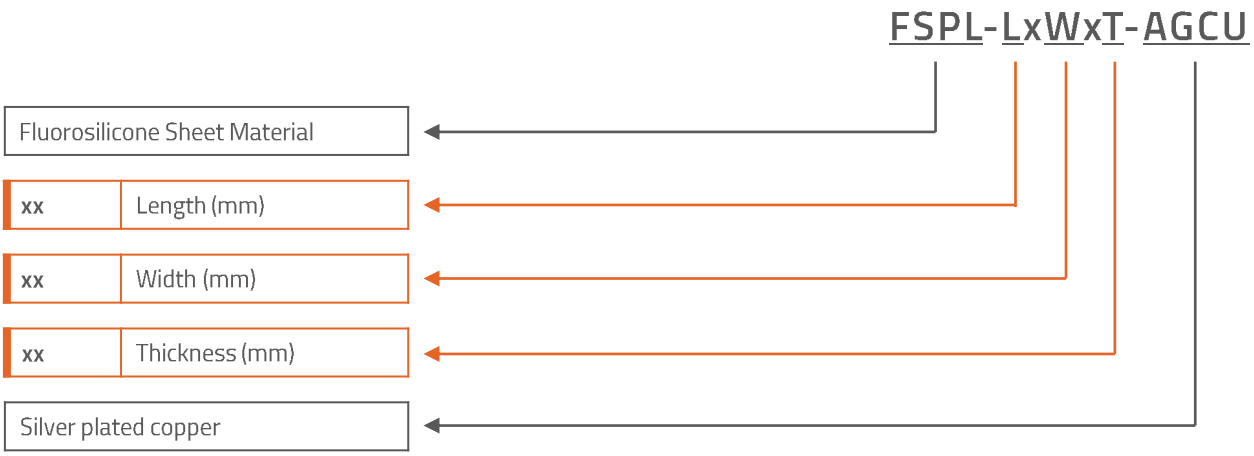
BUILDING AN ITEM NUMBER



Standard options

EXAMPLE

SPL-150x150x1,6-AGCU
Silicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated copper



Standard options

EXAMPLE

FSPL-150x150x1,6-AGCU
Fluorosilicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated copper

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated copper

THICKNESSES AVAILABLE (mm)

0,5 | 0,8
1,0 | 1,2 | 1,5 | 1,6 | 1,8
2,0 | 2,5
3,0 | 3,2

TOLERANCES

SHEET SIZE (mm)		TOLERANCE (mm)
Thickness	<2,0	± 0,15
	>2,0	± 0,25
Length / width		± 0,8

SELF ADHESIVE BACKING

Our silicone sheet material can be supplied with a conductive or non-conductive adhesive. This adhesive has a shelf life of six months and is intended as an assembly aid only.

Self adhesive backing is not recommended for use with fluorosilicone sheets.

SHIELDING EFFECTIVENESS (according to MIL-DTL 83528 C)

	SILICONE	FLUOROSILICONE
20 MHz	106 dB	90 dB
40 MHz	106 dB	106 dB
60 MHz	106 dB	106 dB
80 MHz	112 dB	112 dB
100 MHz	107 dB	106 dB
200 MHz	114 dB	115 dB
400 MHz	111 dB	114 dB
600 MHz	105 dB	108 dB
800 MHz	116 dB	112 dB

	SILICONE	FLUOROSILICONE
1 GHz	112 dB	111 dB
2 GHz	105 dB	104 dB
4 GHz	113 dB	102 dB
6 GHz	100 dB	104 dB
8 GHz	106 dB	112 dB
10 GHz	107 dB	115 dB

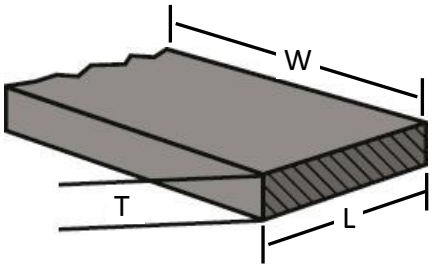
CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated aluminium

Silicone / Fluorosilicone sheet material is loaded with a variety of highly conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing.

It is recommended to use fluorosilicone as elastomer if the conductive elastomer should be resistant against aggressive substances like fuel oils and kerosene.

Silver plated aluminium is an excellent grade high performance material widely used for higher frequency applications.

- Filler material: Silver plated aluminium (AGAL)
- Conductive filler ensures galvanic compatability
- Wide range of standard thicknesses; customer-specific thicknesses and sheet sizes available
- Low contact resistance between mating surfaces
- Fluorosilicone for harsh environments: fuel oils and solvents



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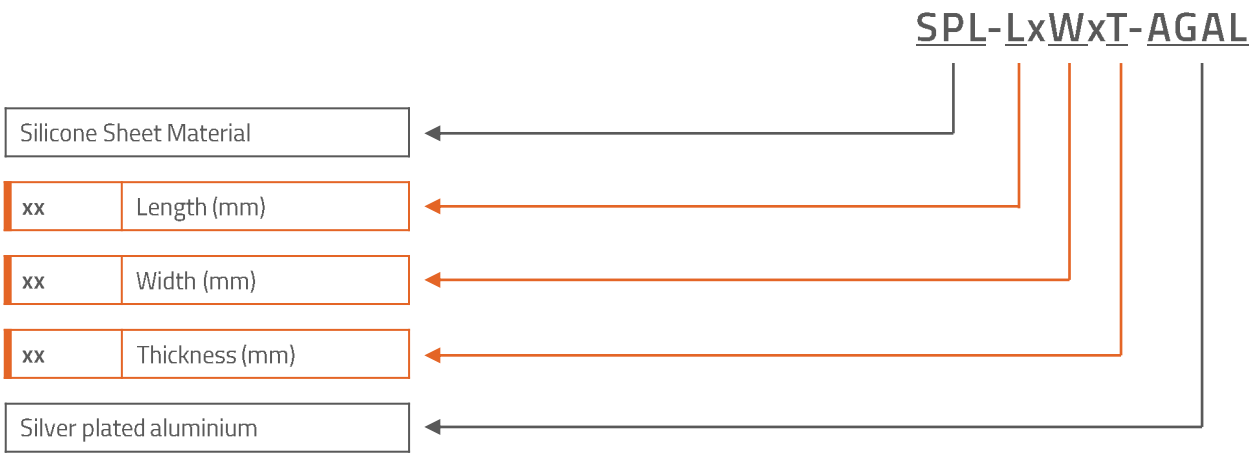
PRODUCT SPECIFICATIONS

PROPERTY	VALUE / TOLERANCE		TEST METHOD
Conductive filler material	Silver plated aluminium (AGAL)		-
Basic material	Silicone	Fluorosilicone	-
Hardness	65 Shore A ± 7	70 Shore A ± 7	ASTM D2240
Volume resistivity	0,008 Ω-cm	0,012 Ω-cm	MIL-DTL 83528 C
Elongation (min)	100 %	60 %	ASTM D412
Tear strength	5,25 N/mm	6,10 N/mm	ASTM D624
Specific gravity	2,0 g/cm³ ± 13 %	2,0 g/cm³ ± 13 %	ASTM D792
Compression set	32,0 % (70h @ 100°C)	30,0 % (70h @ 100°C)	ASTM D395
Tensile strength (min)	1,38 MPa	1,24 MPa	ASTM D412
Operating temperature	-55 – 160 °C	-55 – 160 °C	-
Colour	Tan	Light green	-
Standard sheet sizes (LxW)	150x150 / 250x300 / 300x300 mm		-
Thickness range (T)	0,5 – 3,2 mm		-

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated aluminium

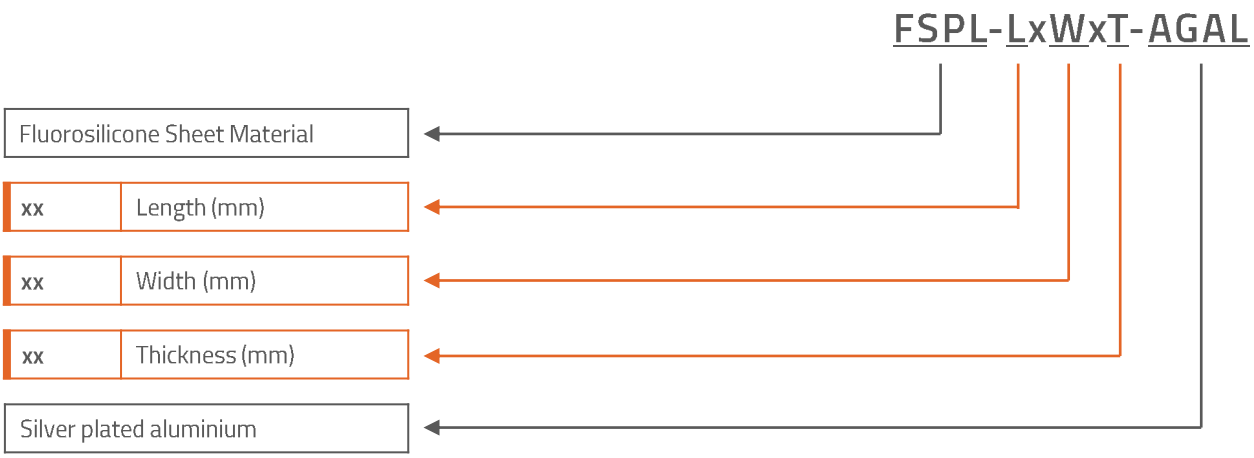
BUILDING AN ITEM NUMBER



Standard options

EXAMPLE

SPL-150x150x1,6-AGAL
Silicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated aluminium



Standard options

EXAMPLE

FSPL-150x150x1,6-AGAL
Fluorosilicone sheet material; sheet size: 150x150; thickness: 1,6 mm;
filler material: silver plated aluminium

CONSTANT CONDUCTIVE ELASTOMERS
SPL-SERIES silver plated aluminium

THICKNESSES AVAILABLE (mm)

0,5 | 0,8
1,0 | 1,2 | 1,5 | 1,6 | 1,8
2,0 | 2,5
3,0 | 3,2

TOLERANCES

SHEET SIZE (mm)		TOLERANCE (mm)
Thickness	<2,0	± 0,15
	>2,0	± 0,25
Length / width		± 0,8

SELF ADHESIVE BACKING

Our silicone sheet material can be supplied with a conductive or non-conductive adhesive. This adhesive has a shelf life of six months and is intended as an assembly aid only.

Self adhesive backing is not recommended for use with fluorosilicone sheets.

SHIELDING EFFECTIVENESS (according to MIL-DTL 83528 C)

	SILICONE	FLUOROSILICONE
20 MHz	108 dB	106 dB
40 MHz	106 dB	103 dB
60 MHz	109 dB	104 dB
80 MHz	118 dB	111 dB
100 MHz	109 dB	108 dB
200 MHz	117 dB	112 dB
400 MHz	123 dB	122 dB
600 MHz	114 dB	108 dB
800 MHz	120 dB	116 dB

	SILICONE	FLUOROSILICONE
1 GHz	114 dB	109 dB
2 GHz	101 dB	100 dB
4 GHz	107 dB	105 dB
6 GHz	105 dB	113 dB
8 GHz	105 dB	117 dB
10 GHz	102 dB	115 dB