

# SILFILL CONDUCTIVE ADHESIVE

## AS Shielding

Our AS Shielding one-part conductive particle filled silicone rubber adhesives are available using standard silicone and fluorosilicone base compounds combined with a selection of particle fillers to produce a readily extrudable paste which self-cures when exposed to atmospheric moisture. Once the thixotropic paste is fully cured it provides excellent adhesion and low volume resistivity.

### Applications:

AS filled silicone adhesives are generally employed as caulking materials to fill voids, surface imperfections on mating surfaces or to retain a conductive gasket in position during assembly. Most conductive gaskets depend on flat, accurate and clean mating surfaces to provide a positive, low impedance bond and the additional use of conductive adhesives should be avoided wherever possible.

Shelf life is up to sixteen weeks (30ml, 55ml) or six months (71ml, 170ml, 310ml) if kept in the original packaging and stored in a dry atmosphere below 23°C.

AS adhesives should be injected under pressure if possible, and, where used as or with a gasket, should be retained under pressure whilst curing. This enhances the conductivity of the compound. Care should be taken when handling the compound as contact can irritate the skin and eyes.

### Specifications:

Standard base rubber is silicone.



### How to order:

Specify: *Series - Filler code - Tube size*

#### Example:

AS-N-030 is a 30ml cartridge of nickel-graphite filled silicone adhesive

#### Notes:

Some filler types may be subject to minimum order quantities.

SERIES	FILLER CODE	TUBE SIZE
AS=Silfill conductive adhesive	N=Nickel Graphite	030= 30ml cartridge
	J=Silver Aluminium	055= 55ml cartridge
	H=Silver Copper	071= 71ml cartridge
		170= 170ml cartridge
		310= 310ml cartridge



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### Further Specifications:

#### SILVER LOADED EPOXY ADHESIVE: PPT Bond Epoxy SE-2P

##### UNCURED PROPERTIES

Colour	Silver
Form	Semi viscous paste
Cure time at 23oC / 50% RH	24 Hours
Recommended minimum time before stressing bond	48 Hours

##### CURED PROPERTIES

Density	3.0g/cm <sup>3</sup>
Adhesion – lap shear (aluminium to aluminium)	850 N.cm <sup>2</sup>
Service temperature range	-50oC to 200oC
Bond resistance (aluminium to aluminium)	<10mΩ/cm <sup>2</sup>
Thermal conductivity	4.8 Wm/K
Recommended bond thickness	0.25mm

#### NICKEL GRAPHITE LOADED RTV SILICONE: PPT Bond AS-N

##### UNCURED PROPERTIES

Colour	Grey
Form	Semi flowable paste
Cure time at 23oC / 50% RH	24 Hours
Recommended minimum time before stressing bond	48 Hours

##### CURED PROPERTIES

Density	2.1g/cm <sup>3</sup>
Hardness	75 Shore A
Adhesion – lap shear (aluminium to aluminium)	150 N.cm <sup>2</sup>
Service temperature range	-50oC to 150oC
Bond resistance (aluminium to aluminium)	<10mΩ/cm <sup>2</sup>
Thermal conductivity	1.0 Wm/K
Recommended bond thickness	0.05 - 05mm

#### SILVER ALUMINIUM LOADED RT SILICONE: PPT Bond AS-J

##### UNCURED PROPERTIES

Colour	Light tan
Form	Semi flowable paste
Cure time at 23oC / 50% RH	24 Hours
Recommended minimum time before stressing bond	48 Hours

##### CURED PROPERTIES

Density	2.1g/cm <sup>3</sup>
Hardness	65 Shore A
Adhesion – lap shear (aluminium to aluminium)	150 N.cm <sup>2</sup>
Compression recommended (allowed range) 25%	(10 - 50%)
Service temperature range	-50oC to 125oC
Bond resistance (aluminium to aluminium)	<20mΩ/cm <sup>2</sup>
Thermal conductivity	0.8 Wm/K
Recommended bond thickness	0.05 - 05mm

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### Further Specifications:

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SILVER COPPER LOADED RTV SILICONE: PPT Bond AS-H

#### UNCURED PROPERTIES

Colour	Tan
Form	Semi flowable paste
Cure time at 23oC / 50% RH	24 Hours
Recommended minimum time before stressing bond	48 Hours

#### CURED PROPERTIES

Density	3.3g/cm <sup>3</sup>
Hardness	65 Shore A
Adhesion – lap shear (aluminium to aluminium)	150 N.cm <sup>2</sup>
Compression recommended (allowed range) 25%	(10 - 50%)
Service temperature range	-50oC to 125oC
Bond resistance (aluminium to aluminium)	<10mΩ/cm <sup>2</sup>
Thermal conductivity	1.0 Wm/K
Recommended bond thickness	0.05 - 05mm