

CONDUCTIVE ADHESIVES

CONDUCTIVE ADHESIVES | 1000 RANGE

EMI



DESCRIPTION:

Arka Technologies' conductive particle filled adhesive sealants are a one part electrically conductive room temperature curing elastomer. They are supplied as a readily extrudable paste that cures rapidly when exposed to atmospheric moisture. When completely cured, Arka Technologies 1000 range conductive adhesives are highly resilient elastomers that exhibit superior adhesion to a variety of substrates as well as low volume resistivity.

FEATURES:

- Electrically conductive
- Thixotropic paste
- Non - corrosive
- Excellent adhesion to various substrates
- One part - no mixing
- Fluorosilicone options available

Surfaces to be bonded must be clean, dry and oil free. Typical solvents used to clean substrates are acetone, methyl ethyl ketone, xylene and isopropyl alcohol. Apply adhesives directly from their package to the desired area. If this product is to be used as a sealant, it should be applied liberally to the interface. It is important to force adhesives into the material being bonded as much as possible. If maximum adhesion and RFI shielding are desired, apply weight to the sealed interface during cure. An appropriate primer is also available for difficult bonding substrates.

Part No.	Type
1000 -	Standard silicone
1000-11100	.5 fl. oz. (metal tube)
1000-11200	1.0 fl. oz. (metal tube or cartridge)
1000-11300	2.5 fl. oz. (cartridge)
1000-11400	10.3 fl. oz. (cartridge)

TYPICAL PROPERTIES

	020 Nickel Graphite	030 Silver Glass	040 Silver Nickel	050 Silver Aluminium	060 Silver Copper	080 Pure Silver
Specific Gravity	2.29	1.82	3.58	1.86	3.58	4.20
Consistency	thick paste	thick paste	thick paste	thick paste	thick paste	thick paste
Lap Shear Strength Minimum (PSI)	150	120	120	175	200	225
Operating Temp. Range (°F)	-55 /+400	-55 /+400	-55 /+400	-55 /+400	-55 /+400	-55 /+400
Skin Over (MIN)	15	15	15	15	15	15
Tack Free (MIN)	90	90	90	90	90	90
Cure for Handling (HRS)	12 - 24	12 - 24	12 - 24	12 - 24	12 - 24	12 - 24
Full Cure (HRS)	72 - 144	72 - 144	72 - 144	72 - 144	72 - 144	72 - 144
Colour	dark grey	light tan	tan	blue	dark tan	tan
Durometer Shore A	65	70	75	68	70	65
Tensile Strength PSI (MIN)	540	415	285	260	285	280
Elongation % (MIN)	210	100	150	155	150	165
Tear Strength #/IN (MIN)	90	52	50	45	50	54
Volume Resistivity OHM-CM	.06	.01	.008	.01	.008	.005

SAFETY AND HANDLING INFORMATION

WARNING: Contact with adhesives is irritating to skin and eyes. If contact is made with the skin, the excess should be wiped off with a dry cloth or paper towel followed by a waterless hand cleaner such as the type used to clean grease or oil from the skin. For specific information regarding safety and handling of this product refer to the Material Safety Data Sheet.

CLEAN UP: Uncured adhesives may be removed from a surface with xylene or acetone.

STORAGE INFORMATION: Shelf life of adhesives are one (1) year from date of shipment provided the products are stored in the dry, tightly sealed, original container below 23oC (73.4oF).

ORDERING INFORMATION: Specify product number, quantity and container size as indicated. Special packaging available upon request.

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CONDUCTIVE SILICONE PSA

By combining highly conductive Silver Plated Particles with a very fine film thickness of our silicone PSA system, we are able to provide an Electrically Conductive PSA on our conductive molded sheets and extrusions, without detrimental results to the shielding effectiveness of the final gasket. This adhesive system is only available when applied by Arka Technologies, and is supplied with a special release liner, fitting the specific application.

Developed for positioning of the gasket during production assembly of your unit, this type of PSA is very low tack, and is not intended to be used as a permanent adhesive system.

	Silver Aluminium	Silver Nickel
Thickness	.001 - .003	.001 - .003
Operating Temp. (C)	-55/+175	-55/+175
Effect on Shielding Effectiveness	<15 dB	<10dB

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CONDUCTIVE TRANSFER PSA FOR CONDUCTIVE SILICONES

3MTM XYZ-Axis Electrically Conductive Adhesive Transfer Tape 9719 is a silicone adhesive isotropically conductive pressure sensitive tape. Tape 9719 conducts electricity through the thickness (Z-axis) and in the plane of the adhesive (X, Y planes) and is suitable for low surface energy (LSE*) EMI/RFI shield and EMI/RFI gasket attachment to metal surfaces. The tape consists of a high performance, low surface energy 3M adhesive loaded with conductive fibres. The result is a double-sided tape providing both good adhesion and good electrical performance. The conductive fibres in tape 9719 also provide improved handling characteristics.

XYZ-Axis Electrically Conductive tape 9719 is suitable for attaching Low Surface Energy (LSE) EMI shields to electronic and electrical devices where high temperature performance (up to 400F [204C]) is required. Tape 9719 may be used with many types of foil laminate shields, to provide a customised shielding solution. This tape may also be used to attach conductive fabric/foam core EMI gaskets to electronic cabinetry. Tape 9719 may be applied in strips or die cut to specific shapes and sizes. Compared to screws or other mechanical connectors, tape 9719 provides reduced assembly time and a solid bond line with no gaps which might result in EMI emission.

Aluminum/Aluminum	Aluminum/Stainless Steel	Copper/Stainless Steel	Copper/Copper
< 2.5 Ohm	< 2.0 Ohm	< 1.0 Ohm	< 0.5 Ohm

Substrate	15 min @ 72oF	1 hr @ 72oF	24 hr @ 72oF	1 hr @ 158oF	24 hr @ 158oF
Stainless Steel	> 30	> 30	> 30	> 30	> 30
Aluminum	> 30	> 30	> 30	> 30	> 30
Copper	> 30	> 30	> 30	> 30	> 30
Silicone Rubber	> 20	> 20	> 20	> 20	> 20