



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS LIMITED ECP-SSE002 SILICONE BASED SILVER CONDUCTIVE COATING

Product overview

ECP-SSE002 is an electrically conductive coating comprising of a pure silver filler dispersed in a silicone elastomer resin base. It can be applied to a wide range of substrates where on curing will form an electrically conductive coating providing excellent RF shielding / electrical continuity. It will adhere to a wide range of polymer substrates including low surface energy materials such as silicone elastomers. Once cured the coating is very flexible and will tolerate relatively high levels of deformation over a wide temperature range

The high conductivity of ECP-SSE002 means that a coating thickness as low as 20 microns can provide effective shielding. The cured coating has good cohesive strength and does not shed conductive particles.

Uncured properties

Colour	Silver
Form	Thixotropic viscous liquid
Density	2.5gcm ⁻³
Touch dry	15 minutes
Curing time (room temperature)	24 hours



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS LIMITED ECP-SSE002 SILICONE BASED SILVER CONDUCTIVE COATING

Cured film properties

Density	3.8 gcm ⁻³
Resistivity (approximately 50 microns)*	<0.1 Ω/square
Resistivity (approximately 100 microns)*	<0.05 Ω/square
Adhesion ASTM D-3359 – 97 (modified)	Pass
Maximum service temperature	160°C
Minimum service temperature	-55°C
Abrasion resistance ASTM-D4060	TBD
Humidity resistance 168 hrs 85% @ 40°C	Pass

* Curing at elevated temperatures 45-85°C will allow the paint coating properties to develop more rapidly and provides lower final resistivity values.

Packaging

TBA

Storage

It is recommended that when not in use that the material is stored in a cool dark, dry place. If kept properly sealed and in a suitable location then the material will remain usable for up to 9 months from date of manufacture.



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS LIMITED ECP-SSE002 SILICONE BASED SILVER CONDUCTIVE COATING

Handling

When using this material observe usual standards of industrial hygiene/practice. Avoid skin/eye contact and work in a well ventilated area. For more detailed information please refer to the SDS (Safety Data Sheet)

Application notes

Ensure the substrate to be coated is free from dust or other contaminants e.g. mould release. Surfaces, particularly if they are glossy, can be wiped down with a compatible solvent in order to improve adhesion and coating uniformity. Always test the suitability of the material prior to use. Some materials such as some synthetic rubbers may contain additives that inhibit curing of coating. Before use the coating should be thoroughly stirred with a spatula or similar item. The quantity of coating immediately required should be decanted into a glass, metal or polypropylene container. It should then be diluted 10 to 20% w/w with xylene and stirred thoroughly before applying. Due to solvent loss in use it may be necessary to add small amounts of xylene in order to maintain the ideal working viscosity.

Apply using a good quality, fine bristle flat brush; a 8 to 12mm artists brush is ideal for smaller areas. Avoid over working or brushing out the coating too thinly. An ideal single cured coating thickness is around 50 microns. If a second coating is required then this can be applied within a few minutes or at the point where the first coat just becomes touch dry.

The undiluted coating can be applied directly to fill/bridge any small gaps or to ensure an unbroken layer over any sharp edges/features.



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS LIMITED ECP-SSE002 SILICONE BASED SILVER CONDUCTIVE COATING

The coating should be sufficiently cured to allow careful handling after 1 or 2 hours. Full electrical properties are developed after 12 or 24 hours depending on coating thickness.

Any brushes, tools and containers can be cleaned up using xylene or petroleum ether. Take care ensure to proper precautions are taken with using these flammable solvents for preparation and cleaning and dispose of solvent contaminated cloth in a suitable fire proof container.

Product notes

To the best our knowledge the information contained in this data sheet is accurate and representative of the product, however, it is the responsibility of the user to determine the suitability, safety and legality of use in any application

We recommend that the end user performs an evaluation to determine the suitability of the product in their application

This product is not intended for direct use in food, medical and cosmetic applications

The values shown on this data sheet are typical and should not be used as the basis of a specification

Information supplied as to the suggested applications for this product should not be construed as constituting a license or concession to infringe any patent. Furthermore we cannot warrant that the sale or use of this product will not infringe any patent involving any application of this product either on its own or in combination with other materials or process.