

# Technical Data Sheet

## Silver Conductive Adhesive 503

### #12686-15

Silver Conductive Adhesive 503 is a general purpose coating that is efficient in direction application to the majority of substrate, such as plastics and elastomers. This product is designed to yield excellent resistance to ultraviolet radiation, oxidation and corona. Known for its easy process, the Silver Conductive Adhesive 503 is conductive, humidity resistant, and flexible. In addition, it dries at room temperature and has superb adhesion.

### Instructions

Keep this product away from heat and open flame, as well as direct sunlight.

Do not freeze Silver Conductive Adhesive 503.

Tightly close the product container when not in use.

Ground and bond the containers when transferring materials.

### Surface Preparation

Coated surface must be dry and free from contaminants (ex: residue, oil).

Smooth surface substrates may be cleaned with solvents such as acetone.

Substrates that are porous should be heated well after the solvent wipe to clear of any contaminants.

### Mixing and Diluting

Our product is supplied ready to use for brushing and roller application.

Before using, we suggest that the material be mixed well with the use of a mechanical stirrer until a suitable consistency is reached.

You may choose to add one or two parts of MEK by volume to one part of the product for spraying, dip coating or impregnation.

Pour the product into a pressure pot or any other appropriate container.

### Spray Application

For smaller production on prototypes, we suggest using a suction cup gun.

Use propeller-type attachments for immediate production to guarantee uniformity of the coating.

Complete production is best handled with propeller agitated pressure pot systems.

We recommend avoiding dry spray, for it will result in weak adhesion.

To minimize overspray, use the minimum atomization pressure required for sufficient coverage.

### Soldering of Coatings

Solder with a 60/40 resin core solder after pre-tinning at a low temperature.

To receive the best result, we recommend using a 20 watt pencil tip soldering iron.

Dip soldering performs best at 195 to 210°C without a flux.

During this process, use a 2% silver, 60/38 solder.

### Composition Properties

#### *Uncured Material*

Solids content by weight, %	16%
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Viscosity, Brookfield – LVT, mPas (cP):	
Spindle 2, speed 12 rpm, shake 5 minutes	1,700

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Density, kg/l	1.75
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Theoretical coverage, m <sup>2</sup> /kg @ 25μm	4.0
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Shelf life, from date of qualification in original seal	2 years
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Flash point °C	20
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*Cured Material*

**Electrical Properties**

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Volume resistivity	127
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Sheet resistivity, ohms/sq. @ 1 mil dry coating thickness	0.05
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