ELECTRODAG 503

May 2011

PRODUCT DESCRIPTION

ELECTRODAG 503 provides the following product characteristics:

Technology	Thermoplastic
Appearance	Silver
Filler Type	Silver
Carrier Type	Methyl Isobutyl Ketone (MIBK)
Solvent	Butyl Acetate, MEK or MIBK
Operating Temperature	275 °C
Product Benefits	• Excellent conductivity • One component • Solvent resistant • Ease of use • Withstands temperature over 260ºC • Dip or wave fluxless soldering • Flexible over temperature range of -40 to >260ºC • Good adhesion to a variety of substrates
Cure	Air dry
Application	Conductive coating
Typical Assembly Applications	Counter electrode silver paint for solid tantalum capacitors

ELECTRODAG 503 coating is specially designed for high temperature applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	62
Viscosity @ 20 °C, mPa·s (cP):	
Speed 20 rpm	1,200
Density, g/cm³	1.75
Coverage , m² /kg:	
@ 25µm dry coating thickness	4
Shelf Life @ 25°C, months	6
Flash Point , ºC	24

TYPICAL PROPERTIES OF CURED MATERIAL

Electrical Properties

Sheet Resistivity , ohms/sq:	
@ 1 mil dry coating thickness	0.05

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

DIRECTIONS FOR USE

1. **Surface Preparation**
   - Surface to be coated must be dry and free on contaminants such as oil or chemical residues.
   - Porcelains and other smooth substrates can be wiped with solvents, such as acetone, and air dried.

2. **Mixing/Dilution**
   - The product is applied by dip.
   - Stir to ensure homogeneity before use.
   - if solvent is added, rolling will avoid air entrapment.
   - Stir periodically during use.

3. **Soldering of Coatings**
   - Dip or wave soldering on ELECTRODAG 503 can be accomplished at 195 to 210°C without the use of flux.
   - Solder composed of 2% silver, 60% tin and 38% lead is recommended for best results, along with a dip time of 4 to 10 seconds.
   - Soldering can be done after an extended period of storage.

Storage

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

Optimal Storage: 25°C. Storage below 25°C or greater than 25°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Empty containers may retain hazardous properties.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation and its affiliates ("Henkel") specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel products. Henkel specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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