Technical Data Sheet

LOCTITE EDAG 503 62% E&C

June 2015

PRODUCT DESCRIPTION

LOCTITE EDAG 503 62% E&C provides the following product characteristics:

Technology	Fluoroelastomer
Appearance	Silver
Filler Type	Silver
Carrier Type	Methyl Isobutyl Ketone (MIBK)
Solvent	Butyl Acetate, MEK or MIBK
Operating Temperature	275 °C
Product Benefits	• Conductive • General purpose • Flexible • High temperature performance • Dries at room temperature • Resistant to acids and alkali • Good adhesion • Humidity resistant • One component • Process ease
Cure	Air dry
Application	Conductive coating
Typical Assembly Applications	• Electrical terminations • EMI shielding • Static bleeds • Fabric coating • Painted antennas • Printed circuitry • Component manufacture • Microwave strip and control lines • Heating elements • Cable coatings • Conductive contact material • Tantalum capacitors

LOCTITE EDAG 503 62% E&C is a general purpose coating suitable for direct application to most substrates including plastics and elastomers. It is designed to exhibit good resistance to ultraviolet radiation, oxidation and corona.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Weight Solids, %	62
Viscosity, Brookfield - LVT, mPa·s (cP):	
Spindle 2, speed 12 rpm, Shake 5 minutes	1,700
Density, kg/l	1.75
Theoretical coverage, m² /kg:	
@ 25µm	4.0
Shelf Life, from date of qualification in original seal, years	2
Flash Point ºC	20

TYPICAL DRYING PERFORMANCE

Recommended Drying Conditions

15 minutes @ 150°C or
1 hour @ 25°C

Percent Volatiles

VOC, g/l	675

Allow LOCTITE EDAG 503 62% E&C to dry at above temperatures prior to soldering.

The above drying profile is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Electrical Properties

Volume Resistivity, Ω·cm	127
Sheet Resistivity , ohms/sq:	
@ 1 mil dry coating thickness	0.05

Specific resistance tests should be conducted prior to design.

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Do not freeze
2. Keep product container tightly closed when not in use
3. Keep away from heat, sparks and open flame
4. Protect material from direct sunlight
5. Ground and bond containers when transferring materials
6. **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.
   - Porous substrates, including materials coated with Aquadag E™ , should be heated sufficiently after the solvent wipe to drive off any entrapped contaminants,solvents and moisture.
7. **Mixing/Dilution**
   - Before use, the material should be mixed thoroughly using a mechanical stirrer or paint shaker until it is of uniform consistency. Check to see that no sediment remains in the bottom of the container..
   - LOCTITE EDAG 503 62% E&C is supplied ready for brushing and roller applications.
   - One or two parts of MEK by volume can be added to one part of the product for spraying, dip coating or impregnation. Use care when dipping plastics that can be affected by MEK.
   - Pour into suitable container for dilution (e.g., pressure pot, etc.).

8. **Spray Application**
   - For small production work prototypes, a suction cup gum may be used, providing LOCTITE EDAG 503 62% E&C is thoroughly mixed prior to spray application.
   - For intermediate production runs or many small parts, propeller-type attachments should be used on the suction gun to ensure coating uniformity.
   - Full production is most efficiently handled with propeller agitated pressure pot systems.
   - Handle LOCTITE EDAG 503 62% E&C as you would a quality automotive lacquer. Avoid dry spray as this will cause poor adhesion.
   - To reduce overspray, use the minimum atomization pressure required for adequate coverage.
   - Further dilution of LOCTITE EDAG 503 62% E&C may be desirable to improve product yield, since any overspray will contain less silver.
9. **Soldering of Coatings**
   - Solder with a 60/40 resin core solder after pre-tinning at a lower temperature.
   - A 20watt pencil tip soldering iron will provide best results.
   - Dip soldering is best at a 195 to 210ºC without a flux.
   - When dip soldering, use a 2% silver, 60/38 solder.

Clean-up
To clean screen and equipment, use MEK

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: 5 to 20°C. Storage below 5°C or greater than 20°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 = N/mm²
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

Disclaimer
Note:
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