Technical Data Sheet

LOCTITE EDAG 477SS RFU E&C

September 2014

PRODUCT DESCRIPTION

LOCTITE EDAG 477SS RFU E&C provides the following product characteristics:

Technology	Polyester
Appearance	Silver
Cure	Heat cure
Operating Temperature-continuous	121ºC
Product Benefits	• Very low sheet resistance • Excellent abrasion resistance and hardness • Excellent flexibility • Extended screen residence time • Superior adhesion to polyester film • High Tg to prevent blocking
Application	Conductive Ink
Typical Assembly Applications	• Membrane switches • Flexible circuits • Printed circuit board

LOCTITE EDAG 477SS RFU E&C conductive, silver-based polymer thick film ink specifically designed for screen printing onto membrane switches.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	73.7
Percent Silver, %	65
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): Spindle 6, speed 20 rpm	14,000
Density, kg/l	2.5
Shelf Life @ 32 °C (from date of qualification in original seal), days	90
Flash Point , Tag Closed Cup Flash Tester, ºC	99

TYPICAL SCREEN PRINTING PROCESS

This product is applied by standard screen printing techniques. The dried film thickness and final resistance is influenced by a number of factors, including screen mesh size, squeegee material, screen material, and emulsion thickness.

Recommended Thickness, dried, µm	8 to 13
Emulsion Thickness , Solvent resistant emulsion , µm	20 to 38
Screen Type:	
Monofilament polyester screen, mesh	157 to 280
Stainless steel screen, mesh	165 to 325
Squeegee (polyurethane or other solvent resistant material):	
For use on Polyester screens, durometer	60 to 70
For use on Stainless steel screens, durometer	70 to 80

TYPICAL CURING PERFORMANCE

LOCTITE EDAG 477SS RFU E&C can be cured at 200°F (93°C) and up. The higher the temperature, the lower the final resistance will be. Increasing the temperature will also reduce the time needed to achieve a final cure. For example, at 200°F (93°C) cure for 15 minutes; at 250°F (121°C) cure for 5 minutes.

Percent Volatiles

VOC, g/l	670

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

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Pencil hardness	B
Theoretical Coverage :	
sq ft/gal	556
m² /kg	5.45

Electrical Properties

Sheet Resistance , ohms/sq	<0.02

GENERAL INFORMATION

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

DIRECTIONS FOR USE

Mixing/Dilution

1. LOCTITE EDAG 477SS RFU E&C is supplied ready for use.
2. Should thinning become necessary, dilute 2% by weight with carbitol acetate.

Clean-up

1. The equipment can be cleaned with MEK, MIBK, Acetone or similar solvents.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Store in a cool, well ventilated area.

Optimal Storage : 32 °C

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.

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
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Reference 1

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Loctite:

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