

LOCTITE EDAG 479SS E&C

August 2022

PRODUCT DESCRIPTION

LOCTITE EDAG 479SS E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Grey Paste
Filler Type	Silver
Cure	Heat Drying
Operating Temperature -Maximum	120°C
Product Benefits	<ul style="list-style-type: none"> • Good conductivity • Low temperature drying • Excellent abrasion resistance and hardness • Excellent creasability • Excellent fine line printing • Extended screen residence time • Superior adhesion to polyester film • Screen printable
Application	Conductive Ink
Typical Assembly Applications	Membrane switches and Flexible circuitry display devices
Typical Substrates	PET, PEN, PI

LOCTITE EDAG 479SS E&C conductive, silver-based polymer thick film ink specifically designed for screen printing onto membrane switches.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solids Content by Weight, %	74.6
Viscosity, Brookfield - RVT, mPa·s (cP):	
Spindle 6, speed 20 rpm, following 5-min shake	12,000
3-hr rest	
Density, kg/l	2.56
Shelf Life @ 2 to 8°C (from date of manufacture), days	365
Flash Point, Tag Closed Cup Flash Tester, °C	110
Theoretical coverage @ 10µm dry film thickness, m ² /kg	15

TYPICAL SCREEN PRINTING PROCESS

Recommended Thickness	
Dry Film, µm	4 to 12

Emulsion Thickness

Solvent resistant emulsion, µm	20 to 40
--------------------------------	----------

Recommended Screen Type

Monofilament polyester screen, mesh/inch	157 to 280
Stainless steel screen, mesh/inch	165 to 325

Recommended Squeegee

Polyurethane or other solvent resistant material	
Polyester screen, durometer	60 to 70
Stainless steel screen, durometer	70 to 80

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle

15 minutes @ 93°C

Percent Volatiles

VOC, g/l	653
----------	-----

Higher temperatures and longer durations improve conductivity and film properties.

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

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Pencil hardness	2H
-----------------	----

Electrical Properties

Sheet Resistance, Ohm/sq/25µm	<0.02
-------------------------------	-------

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Do not expose wet ink to direct sunlight.
2. Do not freeze.
3. Keep product container tightly closed when not in use.
4. LOCTITE EDAG 479SS E&C is supplied ready for use. Should thinning become necessary, dilute 2% by weight with Carbitol acetate.
5. LOCTITE EDAG 479SS E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment.

CLEAN-UP

1. To clean screen and equipment, use a 25% Carbitol acetate 75% Methyl ethyl ketone (MEK) blend.

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 : 2 to 8 °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 Henkel Representative.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb/F}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{N/mm}^2 = \text{MPa}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:

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 specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation 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 Corporation 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.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. © denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 0.5