Technical Data Sheet

LOCTITE EDAG AV 458 E&C

June 2018

PRODUCT DESCRIPTION

LOCTITE EDAG AV 458 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Silver
Filler Type	Silver, Silver chloride blend
Silver : Silver chloride Ratio	3 : 2
Cure	Hot air drying
Operating Temperature - Continuous	100°C
Product Benefits	• Applicable with manual and semi-automatic • Compatible for use with Polycarbonate and polyester film • Non-critical, flexible low temperature drying cycles • Good flexibility
Application	Conductive Ink
Typical Medical Device Application	ECG disposable electrodes and Bio medical sensors

LOCTITE EDAG AV 458 E&C conductive, screen printable ink consist of very finely divided silver and silver chloride particles in a blend of thermoplastic resins. It is specially designed for use as an electrode material in bio medical sensing devices.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	67
Viscosity, Brookfield , 20 °C, mPa·s (cP):	
Speed 20 rpm	27,500
Density, Kg/m³	1,920
Shelf Life @5 to 25°C, year (from date of qualification in original seal)	1
Coverage , m² /kg:	
Wet product @ 10 µm dry coating thickness	17
Flash Point , ºC	62

TYPICAL SCREEN PRINTING PROCESS

Printing Equipment Type

Manual

Semi-automatic

Recommended Screen Type	
Monofilament polyester screen, threads/cm	68 to 110
Recommended Squeegee	
Polyurethane , durometer	70 to 75
Emulsion Thickness	
Emulsion Thickness , µm	20 to 40
Applied Dry Coating Thickness	
Applied Dry Coating Thickness, µm	7 to 12

TYPICAL DRYING CYCLE

Recommended Drying Cycle

Conventional Air Circulated Oven:

30 minutes @ 80°C or

15 minutes @ 95°C or

15minutes @ 120°C

LOCTITE EDAG AV 458 E&C can be dried immediately, after printing, at temperatures between 70 to 120ºC.

Use jet air and infra-red drying for high speed production.

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

Dry Coating on polycarbonate film dried 15 minutes @ 120ºC

Physical Properties :

Adhesion, ASTM 3359, grade	5B

Electrical Properties:

Sheet Resistance@ 25µm dry coating thickness, ohms/sq	<0.12

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. LOCTITE EDAG AV 458 E&C is supplied ready for use and does not require dilution.
2. Stir LOCTITE EDAG AV 458 E&C prior to each use.
3. Avoid rapid stirring as this causes air entrapment.
4. If dilution is necessary, use Arcosolv PM-Acetate, (1 to 2% by weight).
5. If a gel structure forms after extended storage, the product may be warmed slightly in a water bath (not exceeding 65ºC) and stirred.

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 : 5 to 25 °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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