Technical Data Sheet

LOCTITE ECI 8060HV E&C

November 2018

PRODUCT DESCRIPTION

LOCTITE ECI 8060HV E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black paste
Product Benefits	• Screen printable • Rapid heating with fast, defined cut-off temperatures, no external control devices needed • Flexible • Printable on most common substrates
Filler Type	Carbon Black
Operating Temperature-Maximum	60ºC
Cure	Hot air drying or infrared
Application	Printed electronics, Electronically conductive ink
Typical Assembly Applications	Self regulating heating elements used for higher voltage applications (100-220V)
Key Substrates	PET substrates

LOCTITE ECI 8060HV E&C is a Positive Temperature Coefficient (PTC) screen printable ink designed for applications where self regulating heaters are required. This material is formulated to rapidly heat to a specific threshold temperature and then maintain constant temperature for the device. The self-regulating temperature of the bare ink is around 55ºC.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, box oven 2 hours @ 150°C, %	50
Density, g/ml	1.0
Viscosity, Plate & Plate, mPa·s (cP):	
Plate 20 mm @ Shear rate 15 s^{-1}	10,000
Thixotropic Index (1.5/15 s^{-1})	2.7
Theoretical coverage @ 10 µm dry coating thickness, m^2 /kg	46
Shelf Life @ 18 to 28 °C, days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle

10 minutes @ 120°C

LOCTITE ECI 8060HV E&C can be dried using forced air or infrared systems. Care should be taken with infrared. Too much energy can destroy the coating.

Design drying rates for the maximum the substrate and production speeds can tolerate.

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

Physical Properties

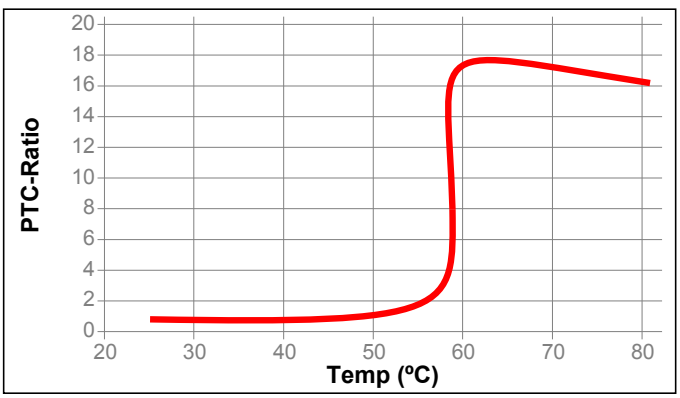
Adhesion to PET	4B
PTC ratio	>10

Electrical Properties

Sheet Resistance per 25 µm, 2-point probe resistance, kOhm/sq	40

Resistance versus Temperature

Below is the Resistance versus Temperature curve of dried PTC-ink, measured on a test design.



GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. **Surface Preparation**
   - Surfaces to be coated must be clean, dry and free of dust.
2. **Mixing/Dilution**
   - LOCTITE ECI 8060HV E&C is supplied ready for use.
   - Mix thoroughly before use to ensure it is homogenous.
   - If dilution is necessary, this can be done with butyl glycol acetate.
   - If needed, the resistance can be slightly increased by

adding LOCTITE NCI 8002 E&C.

3. **Application**

- Recommended screen printing parameters are:

Emulsion Thickness , Solvent resistant, µm	10 to 40
Squeegee Hardness	70 to 90
Screen Type, stainless steel, mesh	250

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.

CLEAN-UP
The equipment can be cleaned with easters (butylacetate, ethylacetate) or ketones (MIBK, MEK).

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

Optimal Storage : 8 to 28 °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.

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

Disclaimer
Note:
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