

LOCTITE HHD 3890 S

August 2019

PRODUCT DESCRIPTION

LOCTITE HHD 3890 S provides the following product characteristics:

Technology	Polyurethane Hot Melt
Appearance	Black
Cure	Moisture
Application	Device assembly, Bonding
Solids Content, %	100
Components	One part - requires no mixing
Product Benefits	<ul style="list-style-type: none">• High strength• High heat resistance

LOCTITE HHD 3890 S is a black-colored high performance hot melt adhesive specially developed for structural bonding of plastics, metal and ink coating where high strength and high heat resistance are required. This adhesive has excellent initial strength after press.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield - Thermosel, 180 °C, mPa·s (cP):	
Spindle 27	3,250
Density @ 25°C ±0.05, g/cm³	0.94
Solids Content, %	100
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Softening Point, °C	~120
Open Time, minutes	2 to 4
Preheating Schedule	20 to 30 mins @ 150 to 180°C
Application Temperature, °C	150 to 180

Open time is the bonding range of a 1 mm bead of molten adhesive on substrate. It is based on room temperature environment. Higher temperature will lengthen the open time while lower environmental temperatures will shorten the open time.

LOCTITE HHD 3890 S can be cured in room temperature and gains its final strength in 1 day. This material, however, exhibits high handling strength instantly after bonding.

Curing is a chemical reaction depending on the following parameters:

- Room temperature
- Bonding substrate
- Room air velocity

- Permeability of the substrates to be bonded

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 PERFORMANCE OF CURED MATERIAL**Miscellaneous**

Cross Tensile Strength, N/mm² :

Sample cured 30 seconds @ 23°C , 50% RH:

Ink glass to PC/ABS	0.8
Ink glass to Mg/Al alloy	0.76

Sample cured 1 day @ 23°C , 50% RH:

Ink glass to PC/ABS	1.56
Ink glass to Mg/Al alloy	2.31

Sample cured 1 day @ 23°C , 50% RH, then put in 65°C, 95% chamber aging 14 days:

Ink glass to PC/ABS	1.08
Ink glass to Mg/Al alloy	1.26

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

Pretreatment:

1. The bonding surfaces must be clean, dry and free of oil and grease.
2. Substrate temperature should not fall below 20°C during application.
3. Lower temperatures will lead to early solidification of the adhesive and to a reduced open time, the adhesive might even flake off.
4. The substrates may be preheated if necessary.

Application:

1. LOCTITE HHD 3890 S can be applied from heating cartridge guns, from usual syringe type melting equipment.

STORAGE:

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

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.

Conversions

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

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