Technical Data Sheet

LOCTITE® HHD 3544F

March 2023

PRODUCT DESCRIPTION

LOCTITE® HHD 3544F provides the following product characteristics:

Technology	Polyurethane hot melt
Appearance	Beige solid
Odour	Slight
Solids content, %	100
Cure	Moisture
Application	Structural adhesive, Electronic structural bonding

LOCTITE® HHD 3544F is a reactive hot-melt adhesive based on polyurethane prepolymers. This adhesive provides good basic bonding performance and has a long open time ideal for automatic or manual assembly line production. LOCTITE® HHD 3544F has 60% bio-based raw material content.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield - Thermosel, 110°C, mPa.s (cP):	
Spindle 27	~5,000
Density @ 25°C, ± 0.05 g/cm^3	1.1

TYPICAL CURING PERFORMANCE

Open time @ 25°C, minutes	4
Preheating schedule @ 110°C, minutes	20 to 30
Application temperature, ºC	90 to 120

The bonding range of a 1.75 mm bead of molten adhesive on substrate. Open time is based on room temperature environment. Higher temperature will lengthen the open time while lower environmental temperatures will shorten the open time.

LOCTITE® HHD 3544F cures exclusively by moisture and gains its final strength in 1-5 days. This material, however, exhibits high handling strength instantly after bonding.

Curing is a chemical reaction depending on the following parameters:

- Humidity in the rooms of application and storage
- Moisture content on the substrates
- Permeability of the substrates to be bonded
- Application volume / layer of the adhesive film

The above cure profiles are guideline recommendations. 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	
Tensile modulus, MPa	190
Tensile strength, MPa	11
Elongation at break, %	1,070
Adhesion properties	
Cross tensile strength, 24 hours, PC/SUS, MPa	>3

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 20ºC 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 3544F can be applied from heating cartridge guns, from usual syringe type melting equipment.
2. At longer rest periods, melting and application temperatures should be decreased. Longer exposure to higher temperatures can lead to a viscosity increase.

Storage

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

Optimal storage: 18 to 26°C

Minimum transport temperature: 10°C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 quality department for assistance and recommendations on the specifications of this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
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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