

LOCTITE® HHD 4043RD

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PRODUCT DESCRIPTION

LOCTITE® HHD 4043RD provides the following product characteristics:

Technology	Acrylic
Appearance	Red liquid
Product benefits	• Fast cure • One component • Cures in shadowed areas • Easy dispensability without stringing
Cure	Ultraviolet (UV) light activation followed by room temperature moisture cure
Application	Device assembly; Structural bonding
Key substrates	PC/AI/SUS

LOCTITE® HHD 4043RD is a UV/moisture cure adhesive designed for fast assembly and shadow curing. It is use on a wide variety of plastic substrate bonding. The viscosity of this product makes it well suitable for applications where flow control and dispense volume are highly required.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, TA Rheometer, 20mm 2° Cone, 25°C, mPa.s (cP)	
@ 10 s ⁻¹	10,860
@ 100 s ⁻¹	3,840
Thixotropic index, (10S ⁻¹ /100S ⁻¹)	2.8
Density @ 25°C, g/cm ³	1.08
Work life, viscosity change ≤20%, days	3
Shelf life @ 0-10°C, (from date of manufacture), months	6

TYPICAL CURING PERFORMANCE

UV cure light source	LED or UVA light
UV Wavelength, nm	365 or 375 or 405
Light intensity, mW/cm ²	200
Exposure time, seconds	15

Followed by room temperature moisture cure 24 hours @ condition of 50%RH

Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and light transmittance of the substrate through which the light must pass.

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

Sample cured with initial UVA 3,500 mJ/cm² followed by room temperature moisture cure 24hr @ condition of 50%RH

Physical Properties

Storage modulus, DMA, 25°C, MPa	1,893
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Adhesion properties

Lap shear strength, PC to AI, MPa	12
Push out strength, PC to SUS, MPa	7

GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

Thawing

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
4. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.

Direction for use

1. This product is UV light sensitive: exposure to daylight, UV light, and artificial lighting should be kept to a minimum during storage and handling.
2. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmission of the substrate through which the radiation must pass.
3. Thawed material should immediately be placed on dispense equipment for use.
4. If the adhesive is transferred to a final dispensing reservoir, care must be exercised to avoid entrapment of contaminants and/or air into the adhesive.
5. Adhesive must be completely used within the product's recommended work life.
6. Alternate dispense amounts may be used depending on the application requirements.

Storage:

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

Optimal Storage: 0 to 10°C. Storage below 0°C or above 10°C can adversely affect product properties.

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

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

Disclaimer

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