

LOCTITE HHD 3212

August 2019

PRODUCT DESCRIPTION

LOCTITE HHD 3212 provides the following product characteristics:

Technology	Epoxy
Appearance	Straw liquid
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none">• One component• Fast cure• High impact strength• Low halogen content
Application	Device assembly, Structural bonding

LOCTITE HHD 3212 is low halogen one-component epoxy designed for assembly of electronic components in handheld device market. This product is particularly suited where fast cure and high impact strength applications are required.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield - RTV, 25 °C, mPa·s (cP):	
Spindle 52, speed 1 rpm	30,000
Specific Gravity @ 25°C	1.11
Pot Life @ 25°C, days	5
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE**Cure Schedule**

30 minutes @ 150°C

With all curing systems, the time required for cure depends on the rate of heating. Cure rate depends on the mass of material to be heated and intimate contact with the heat source. Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results.

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.

Isothermal DSC Conversion

100 % @ 150°C, minutes	1.6
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TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured 30 minutes @ 150°C

Physical Properties

Hardness, Shore D	59
Elongation @ break, %	72
Volume Shrinkage on Cure, %	2.5
Linear Shrinkage	0.8
Glass Transition Temperature (Tg) by DSC, °C	28
Water Absorption, 24 hours in water @ 23°C, %	0.8
Tensile Modulus	N/mm ² 600 (psi) (87,022)

Electrical Properties

Volume Resistivity, IEC 60093, ohm-cm	1.8×10 ¹⁴
Surface Resistivity, IEC 60093, ohms	2.8×10 ¹⁵
Dielectric Constant / Dissipation Factor, IEC 60250:	
@ 200 KHz	2.67/0.03
@ 400 KHz	2.63/0.03
@ 600 KHz	2.61/0.03
@ 800 KHz	2.59/0.03
@ 1 MHz	2.58/0.04

TYPICAL PERFORMANCE OF CURED MATERIAL

Sample cured 7 days @ 23°C, 50% RH

Miscellaneous

Tensile Strength	N/mm ² 14 (psi) (2,031)
Lap Shear Strength :	
Steel (grit blasted)	N/mm ² 19.0 (psi) (2,756)
Galvanized steel	N/mm ² 18.2 (psi) (2,640)
Nickel steel	N/mm ² 17.0 (psi) (2,466)
Side Impact Strength, KJ/mm ² :	
Steel (grit blasted)	14.8
Galvanized steel	9.3
Nickel steel	11.9

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).

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.

STORAGE

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

Optimal Storage: -20 °C. Storage greater than -20 °C can adversely affect product properties.

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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The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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