Technical Data Sheet

LOCTITE HHD 8192R

November 2018

PRODUCT DESCRIPTION

LOCTITE HHD 8192R provides the following product characteristics:

Technology	Acrylic
Appearance - Part A	Amber
Appearance - Part B	Blue
Appearance - Mixed	Green
Components	Two components - requires mixing
Mix Ratio by volume, Part A:Part B	10 : 1
Cure	Room temperature cure after mixing
Product Benefits	• Superior impact and peel strength • Little or no surface preparation • Rapid room temperature cure • Excellent environmental resistance • Halogen-free
Application	Device assembly, Structural bonding

LOCTITE HHD 8192R two component, methacrylate adhesive system specifically formulated to have longer open/work time to allow excellent bond strength on multiple substrates, including metals and composites. LOCTITE HHD 8192R forms resilient bonds and maintains its strength over a wide range of temperatures. The product provides high elongation and peel strength. Typical applications for LOCTITE HHD 8192R include structural bonding of plastic and metal components that must withstand vibrations and impacts such as in portable devices.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity , mPa·s (cP):	
Parallel Plate 25, 0.5 mm gap @ Shear rate of 20 s^{-1}	25,000 to 55,000[LMS]
Specific Gravity @ 25 °C	0.98
Flash Point - See SDS	

Part B Properties

Viscosity , mPa·s (cP):	
Parallel Plate 25, 0.5 mm gap @ Shear rate of 20 s^{-1}	30,000 to 60,000[LMS]
Specific Gravity @ 25 °C	1.16
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Open Time, minutes	4 to 6
Peak Exotherm, 15 gram mass:	
Time to Peak Temperature, minutes	6 to 14[LMS]
Peak Temperature, ºC	>95

1. LOCTITE HHD 8192R is cured after mixing at room temperature.
2. Cure speeds may vary based on adhesive and substrate temperatures. Reference the peak exotherm and open times on this datasheet as a guide to better understand curing time trends.
3. After the fixture time is achieved the material usually has reached handling strength. For heavy parts handling strength can take longer.
4. Parts should be fixed for a minimum period of 24 hours prior to applying a load.

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 Break, N/mm²	22.7
Tensile Modulus, N/mm²	740
Elongation, %	83

TYPICAL PERFORMANCE OF CURED MATERIAL

Sample cured 30 minutes @ 80°C plus 24 hours @ 25°C

Shear Strength

Shear Strength, N/mm² :	
ISO 4587 Standard testing:	
Anodized Aluminum	19.3[LMS]
ISO 13445 Standard testing:	
Polycarbonate	13
ABS	13
Acrylic	19

Miscellaneous

Tensile Strength, Cross Bond, tested using Henkel STM-831 , N/mm² :	
Polycarbonate	3.5
Anodized Aluminum	12.5
T-Peel Strength, tested using ISO 11339 Standard, N/mm:	
Aluminum	2.3

GENERAL INFORMATION

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

DIRECTIONS FOR USE

Mixing

1. LOCTITE HHD 8192R is typically applied either with the use of meter mix equipment or directly out of cartridges through static mix nozzles. These methods of application ensure that component A and B are dispensed and mixed at the proper ratio. When properly mixed, LOCTITE HHD 8192R should achieve a uniform color.
2. When dispensed in a large mass, heat buildup during and after mixing is normal. To reduce the likelihood of an exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

Application

1. For best performance, surfaces should be clean and residue free prior to adhesive application.
2. To assure maximum bond strength, surfaces must be mated within the adhesive's open time.
3. Use enough material to completely fill the joint when parts are clamped.

Clean up

1. It is important to clean up excess adhesive from the work area and application equipment before it cures.
2. Excess uncured adhesive can be cleaned with ketone type solvents.
3. Cured adhesive typically requires mechanical abrasion for removal.
4. Always test the suitability and effect of any cleaning method on the specific materials that it will come in contact with first.

STORAGE:

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

Optimal Storage : 2 to 8 °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:
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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