

# LOCTITE® UR 8541RD

June 2023

## PRODUCT DESCRIPTION

LOCTITE® UR 8541RD provides the following product characteristics:

<b>Technology</b>	Polyurethane
Chemical Type	Polyurethane
Appearance	Red
Components	One component - requires no mixing
Viscosity	Low
<b>Cure</b>	Moisture cure
<b>Application</b>	Lamination
Specific Benefits	<ul style="list-style-type: none"> <li>• Excellent bonding strength</li> <li>• Excellent chemical resistance</li> <li>• Excellent environmental resistance</li> <li>• Excellent adhesion to untreated aluminum frame</li> </ul>

LOCTITE® UR 8541RD is part of a series of single component, solvent free, liquid polyurethane (LPUR) adhesives which differ only in open time to suit customer requirements. LOCTITE® UR 8540RD Series cures with moisture to form a tough, strong, and thermoset polymer. This series is an enhanced version of the LOCTITE® UR 8340RD Series. The improved version was formulated to target high-stress areas with added aluminum requirements without compromising any of the current qualities from Henkel's original LPUR solutions.

LOCTITE® UR 8541RD can be used for lamination of sandwich panel elements of wood, lauan, fiberboard, particle board, plywood, FRP, EPS foam, PU foam and primed metals. Typical applications include structural lamination for RV's, motor homes, and trailers.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Density @ 25 °C, g/cm <sup>3</sup>	1.08
Solids, %	100
Viscosity @ 25 °C, mPa·s (cP)	5,500

## TYPICAL CURING PERFORMANCE

### Cure Mechanism

Curing with water	
Open Time @ 24 °C, minutes	38
Press time @ 24 °C, minutes	82

## 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).**

### Directions for use:

Due to its moisture curing nature, at least one substrate needs to be porous, or perforation of at least one of the substrates is needed.

Although 38 dyne or higher of the substrate surface energy level does not guarantee structural bonding, any substrates with surface energy level below 38 will almost surely result in unsatisfactory structural bonding.

1. For high strength structural bonds, remove surface contaminants such as oils, dust, mold release agents and all other surface contaminants.
2. Use gloves to minimize skin contact. DO NOT use solvents for cleaning hands.
3. LOCTITE® UR 8541RD can be applied through bead extrusion or manual troweling.
4. Deposition rate can vary from 10 to 20 g/sqft, depending on substrate porosity. For maximum bond strength apply adhesive evenly to surfaces to be joined.
5. Typical water misting rate is 10-15% of the coating weight or 1-2 g/sqft but can be adjusted beyond this range to compensate extreme weather conditions. Water should be evenly distributed without droplets.
6. Join the adhesive coated surfaces and allow to cure. Press is needed during the moisture curing of the adhesive.
7. Intimate contact pressure between sandwich panel elements is necessary during the setting time. Contact pressure with a vacuum press of 6" of mercury or greater is recommended.
8. Refer to LOCTITE® UR 8541RD lamination guideline for further information.
9. Propylene carbonate, dibasic esters, or some organic solvents can be used to clean uncured material.
10. Cured material can only be removed mechanically.

### Product Specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

**Storage**

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling. **Optimal Storage: 15 to 21°C. Storage below 15°C or greater than 30°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 Henkel.

**Approval and Certificate**

Please contact your local Henkel representative for related approval or certificate of this product.

**Data Ranges**

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C/50% RH = 23±2°C/50±5% RH.

**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/mm<sup>2</sup> 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

**Disclaimer**

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:**

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

**In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:**

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:**

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

**Trademark usage**

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

**Reference 2**