

## Description

LOCTITE® EA 0151 is a clear two-component epoxy having optical clarity when used in small quantities LOCTITE® EA 0151 is easy to mix and has a long pot life.

**Recommended Substrates:** Glass, Metals, Circuit Boards, Fiber Optics and many Plastics.

## Features

Clear Color  
RT or Heat Cure  
Bonds Many Materials  
Easy to Mix  
100% Solids  
Thixotropic Paste

Typical Uncured Properties	Part A	Part B	Mixed
Pot Life @ 77°F, 100 grams mins	--	--	60
Color	Milky White	Amber	Clear
Viscosity, cP	40,000 to 100,000	20,000 to 100,000	--
Specific Gravity	1.13	0.98	--
Mix Ratio			
By weight	100	33	
By volume	2.7	1	

Typical Properties	Typical Value
Tensile Strength, psi, ASTM D 638	--
Elongation, %, ASTM D 638	2.4
Tg, °F	136
CTE, ASTM D 696, in/in/ °C	47 x 10 <sup>-6</sup>
Thermal Conductivity, cal x cm/cm <sup>2</sup> x secs x °C	5.6 x 10 <sup>-4</sup>
Shrinkage, %	<0.3
Hardness, Shore D	85

Electrical Properties	Typical Value
Dielectric Strength, ASTM D149, V/mil	1080
Dielectric Constant, MIL 1-16923. K 1kHz	3.88
Dissipation Factor, ASTM D 150 1kHz	5.3 x 10 <sup>-4</sup>
Volume Resistivity, ASTM D 257 ohm/cm	1.26 x 10 <sup>+15</sup>
Surface Resistivity, ASTM D 257	--

Shear Strength, psi, ASTM D 1002 Etched Aluminum		
Cure Schedule	Test Temp °F	Typical Value
3 Days @ 77°F	-67	1600
	77	1850
	180	400
2 Hours @ 140 °F	-67	2700
	77	3000
	180	600
1 Hour @ 180 °F	-67	2700
	77	3000
	180	500

Outgassing Performance	NASA 1124
Total Mass Loss, %	1.51
Collected Volatile Condensable Material, %	0.01

## Handling

**Mixing:** This product requires mixing two components together just prior to application. Complete mixing is necessary. The temperature of the separate components prior to mixing is not critical, but they should be close to room temperature.

## Application

**Mixing - Bulk:** Combine Part A (resin) and Part B (hardener) in the correct ratio and mix thoroughly until the color and consistency are uniform. EPOXI-PATCH® Tube Kits have been designed so that squeezing **EQUAL LENGTH BEADS of Part A & Part B** will give proper ratio. Ratios given above can be used for measuring larger amounts. Mixing the adhesive just prior to use is recommended. Heat buildup during or after mixing is normal. Do not mix quantities greater than two pounds as dangerous heat buildup can occur causing uncontrolled decomposition of the mixed adhesive. Mixing smaller quantities will minimize the heat buildup.

**Mixing - Cartridges:** Place cartridge in proper dispenser. To begin using a new cartridge, remove cartridge cap and dispense a small amount of adhesive, making sure both Parts A & B are extruding. Attach nozzle and dispense approximately 1-2" before applying onto the part to be bonded. Partially used cartridges can be stored with the mixing nozzle attached. To reuse, remove and discard the old nozzle, attach the new nozzle, and begin dispensing.

**\*\*Note\*\*** Mix cartridge dispenses adhesive in a 2:1 ratio. Tests show no significant effect on bond performance compared to 2.7:1 ratio.

**Application:** Bonding surfaces should be clean and dry. Once the adhesive is applied, the bonded parts should be held in contact until the part has developed handling strength. It is not necessary to clamp the parts unless movement during cure is likely.

**Cure:** Complete cure is obtained after three days at room temperature. After 24 hours, approximately 90% of full cure properties are attained. Hysol 0151 will achieve handling strength in 6-8 hours at 77°F (note: this can vary with different bond configurations). Hysol 0151 can also be completely cured with heat such as: 2 hours at 140°F; 1 hour at 180°F; or 30 minutes at 250°F. Heat cures can be modified to achieve a desired degree of cure from handling strength to full cure.

**Clean Up:** It is important to remove excess adhesive from the work area and application equipment before it hardens. Many common solvents and citrus cleaners are suitable for removing uncured adhesive. Consult with your supplier's information pertaining to the safe and proper use of solvents.

### Storage

Store product in unopened container in a cool dry location. Ideal conditions are within the range 8 to 21 degrees C (46 to 70 degrees F) and are recommended for long term storage. Exposure to higher temperatures (greater than 28 degrees C) for prolonged periods should be avoided as extended exposure to warm conditions can adversely affect product properties. For further specific shelf life information, contact your local Technical Service Center.

### 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.

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, Resin Technology Group, Inc., or Henkel Canada, Inc. 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.

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 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.

### 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.