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# Laboratory Data Sheet

## Hysol® Product U-04FL

formerly Durabond U-04FL

Industrial Version, August 2001

### PRODUCT DESCRIPTION

LOCTITE® Hysol® Product U-04FL is a fast setting, high viscosity, two-component urethane adhesive. Once mixed, the industrial grade urethane cures at room temperature to form a tan, highly flexible bond line, with excellent peel and shear strength. Extremely tough and fast curing, it forms permanent bonds to a variety of substrates, including rubber, urethane, PVC, metal, glass, masonry and plastics. The products excellent flexibility and elongation properties also make it suitable as a sealant in the most demanding environments.

### TYPICAL APPLICATIONS

- Form tough, flexible, waterproof bonds to rubber, plastics, metal and masonry parts
- Repair cast urethane screens and liners
- Potting, encapsulating and strain relief
- Rubber belt repair

### PROPERTIES OF UNCURED MATERIAL

<b>Resin</b>	<b>Typical Value</b>
Chemical Type	Polyisocyanate
Flash Point (TCC), °C (°F)	>93 (>200)
<b>Hardener</b>	<b>Typical Value</b>
Chemical Type	Polyol
Flash Point (TCC), °C (°F)	>93 (>200)
<b>Mixture</b>	<b>Typical Value</b>
Appearance	Thick tan liquid
Mix Ratio (R:H) by Volume	1 to 1

### TYPICAL CURING PERFORMANCE

<b>Cure speed</b>	<b>Typical Value</b>
(@ 25°C unless noted)	
Worklife, minutes	4
Cure time, hours	2

### TYPICAL PROPERTIES OF CURED MATERIAL

(@ 25°C unless noted)			
<b>Physical Properties</b>	<b>Typical Value</b>		
	<b>2 hours</b>	<b>4 hours</b>	<b>7 days</b>
Tensile Strength ASTM D638, psi	800	900	1,300
Tensile Elongation ASTM D-638, %	400	375	360
Hardness ASTM D-2240, Shore D	68	73	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 Material Safety Data Sheet, (MSDS).**

#### Important Note:

Loctite Hysol U-04FL cures very quickly at high temperatures, reducing adequate working time and possibly causing premature curing. When applying U-04FL at temperatures above 25°C (77°F) or to a warm surface, refrigerate material thoroughly before applying to parts.

### Directions for use:

1. For high strength structural bonds, removal of surface contaminants such as paint, oxide films, oils, dust, mold release agents and all other surface contaminants is required.
2. Use gloves to minimize skin contact. DO NOT use cleaning solvents for cleaning hands.
3. To use simply insert the cartridge into the application gun and start the plunger into the cylinders using light pressure on the trigger.
4. Next, remove the cartridge cap and expel a small amount of adhesive to be sure both sides are flowing evenly and freely.
5. Discard first 2-5 grams dispensed to avoid initial mix inconsistencies.
6. For maximum bond strength, apply adhesive evenly to both surfaces to be joined.
7. Work quickly as material will begin to cure in the static mixer within 2-5 minutes.
8. It is not necessary to use all the urethane in the cartridge in one application. Leave the static mixer on the cartridge when application is complete. The mixer serves as a seal and should be discarded and replaced with a fresh mixer for the next application.

### Storage

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C (46°F to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact your local Technical Service Center.

### Data Ranges

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

### Note

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, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite 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 Loctite 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.

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