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# **Product Description Sheet**

## **Hysol® Product 9432NA**

**Industrial Products, August 2001** 

## Description

Loctite® Hysol® 9432NA is an aluminum filled, thixotropic, one component epoxy adhesive. Hysol 9432NA is formulated to provide excellent tensile shear strength over a wide range of temperatures and a high degree of impact resistance. This adhesive can bond oily and other poorly prepared surfaces and can be used to bond a wide variety of substrates. Hysol 9432NA is designed to cure at moderate temperatures but has a long shelf life at room temperature. This adhesive can be easily pumped and dispensed onto parts without sagging due to its high thixotrophy.

#### **Features**

One Component – No Mixing Required Thixotropic Non Sag Paste Excellent High Temperature Performance Excellent Chemical Resistance Room Temperature Storage Tolerant to Poorly Prepared Surfaces

## **Typical Properties**

Color Gray
Viscosity, cP 150,000-300,000
Specific Gravity @ 77°F 1.38
Density lb per Gallon 11.5

Slump @ 300°F(" Diameter bead on vertical) 0.3" Max

## **Application**

Applying: Please read and understand the Material Safety Data Sheet before using this product. Allow material to come to room temperature before use. Bonding surfaces should be clean, dry and properly prepared. Apply adhesive to one or both substrates to be bonded. The parts must be held in contact until the adhesive is cured. It is important to remove uncured adhesive before curing. See "Clean Up" below for removal of uncured adhesive. Once cured, 9432NA is very difficult to remove. Large quantities of uncured adhesive may exotherm during the cure cycle. Avoid quantities larger than 10 grams in mass. Larger quantities in a bondline are safe to cure.

<u>Cure:</u> Hysol 9432NA can be cured for 60 minutes at 250°F. Faster cures can be achieved by using higher temperatures, for example, 30 minutes at 300°F. Cure temperatures above 350°F and below 250°F are not recommended. Cure time on your part will depend upon factors such as part geometry, materials to be bonded, bondline thickness and efficiency of the oven. Cure schedule should be confirmed with actual production parts and equipment. A clamping pressure of 15 psi is recommended to ensure that good contact in maintained during the cure cycle.

<u>Clean Up:</u> Uncured adhesive can be removed from the work area and application equipment by using many common solvents and citrus cleaners. Consult with your supplier's information pertaining to the safe and proper use of solvents.

#### **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.

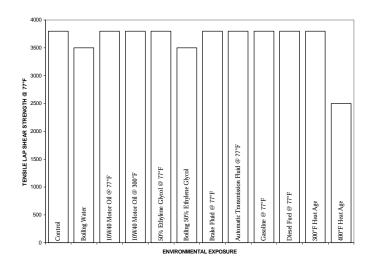
For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

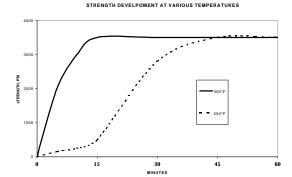
| Shear Strength, psi, ASTM D 1002 Etched Aluminum |              |               |  |
|--------------------------------------------------|--------------|---------------|--|
| Cure Schedule                                    | Test Temp °F | Typical Value |  |
| 30 mins @ 300°F                                  | -67          | 3500          |  |
|                                                  | 77           | 3800          |  |
|                                                  | 250          | 3000          |  |
|                                                  | 300          | 2400          |  |
|                                                  | 350          | 400           |  |
|                                                  | 400          | 400           |  |

| Shear Strength, psi, ASTM D 1002 Cured 30 Mins @ 300°f |              |                  |  |
|--------------------------------------------------------|--------------|------------------|--|
|                                                        | Test Temp °F | Typical<br>Value |  |
| Degreased Aluminum                                     | 77           | 3500             |  |
| CR Steel Abraded                                       | 77           | 3000             |  |
| CR Steel Degreased                                     | 77           | 2850             |  |
| CR Steel Oily                                          | 77           | 2600             |  |
| Owens Corning Fiberglas SMC                            | 77           | 400              |  |
| Budd Company Fiberglas SMC                             | 77           | 380              |  |
| Fiberglas Vinyl Ester Laminate                         | 77           | 1000             |  |

| Typical Properties                | Typical Value |
|-----------------------------------|---------------|
| Tensile Strength, psi, ASTM D 638 | 7350          |
| Modulus, psi, ASTM D 638          | 680,000       |
| Elongation, %, ASTM D 638         | 1.2           |
| Hardness, Shore D                 | 90            |

**Environmental Resistance:** Reported as tensile lap shear strength tested at 77°F per ASTM D 1002 after a 30 day soak in the specified fluid. Tensile lap shear on 16 gauge sandblasted cold rolled steel with 5 mil bondline cured for 30 minutes at 300°F.





## **Packaging**

One Gallon Cans, Five Gallon Pails

#### Storage

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 2° to 8°C (36° to 46°F). unless otherwise labeled. Optimal storage conditions of this product is achieved with refrigeration: Refrigerated packages shall be allowed to return to room temperature prior to use. To prevent contamination of unused product, do not return any material to its original container. For specific shelf-life information, contact your local Technical Service Center.

#### 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.