

# LOCTITE ABLESTIK FDA 22

August 2012

## PRODUCT DESCRIPTION

LOCTITE ABLESTIK FDA 22 provides the following product characteristics:

|                                                |                                                                                                                                                                                       |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>                              | Epoxy                                                                                                                                                                                 |
| <b>Appearance</b>                              | Tan                                                                                                                                                                                   |
| <b>Components</b>                              | Two part - Resin & Hardener                                                                                                                                                           |
| <b>Mix Ratio, by weight - Resin : Hardener</b> | 100 : 40                                                                                                                                                                              |
| <b>Product Benefits</b>                        | <ul style="list-style-type: none"> <li>• High viscosity</li> <li>• Electrically Insulating</li> <li>• Low permeability to gases and vapors</li> <li>• Low temperature cure</li> </ul> |
| <b>Cure</b>                                    | Heat cure or Room temperature cure                                                                                                                                                    |
| <b>Application</b>                             | Medical                                                                                                                                                                               |
| <b>Operating Temperature</b>                   | -70 to 145 °C                                                                                                                                                                         |
| <b>Typical Medical Device Application</b>      | Catheters, Hearing aids, Dental products and Other biomedical instruments and devices                                                                                                 |
| <b>Other Application Areas</b>                 | Food preparation processing and packaging                                                                                                                                             |

LOCTITE ABLESTIK FDA 22 is designed for bonding and coating applications. LOCTITE ABLESTIK FDA 22 bonds offer resistance to water and weathering, galvanic action, petroleum solvents, lubricants, fuels, mild acids and alkalis and other organic and inorganic compounds.

## USP CLASS VI BIOLOGICAL REACTIVITY TESTING

LOCTITE ABLESTIK FDA 22 was originally formulated in accordance with Title 21, U.S. Code of Federal Regulations, Food and Drug Administration (FDA) Chapter 1, Sections 175.105 and 175.300. In 1997, this product was also tested by an independent laboratory in accordance with USP Biological Reactivity Tests, In Vivo, Classification VI, and found to be in compliant at that time. This product has not, however, been compared to revisions of these regulations over time.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

|                              |      |
|------------------------------|------|
| Thixotropic Index (5/50 rpm) | 1.2  |
| Specific Gravity, mixed      | 1.45 |
| Reactive solids contents, %  | 100  |
| Pot Life, hours              | 3    |
| Flash Point - See SDS        |      |

### Mixed Properties:

|                            |        |
|----------------------------|--------|
| Mixed Viscosity, cP @ 25°C | 28,000 |
|----------------------------|--------|

## TYPICAL CURING PERFORMANCE

### Cure Schedule

|                     |
|---------------------|
| 24 hours @ 25°C or  |
| 1 to 4 hours @ 65°C |

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

|                                          |    |
|------------------------------------------|----|
| Coefficient of Thermal Expansion, ppm/°C | 47 |
| Hardness, Shore D                        | 78 |
| Elongation, %                            | 5  |

### Electrical Properties

|                                   |                       |
|-----------------------------------|-----------------------|
| Volume Resistivity, ohm-cm @ 25°C | 1.50×10 <sup>14</sup> |
| Dielectric Strength, volts/mil    | 420                   |
| Dielectric Constant @ 25°C :      |                       |
| 1kHz                              | 3.5                   |
| Dissipation Factor @ 25°C:        |                       |
| 1kHz                              | 0.02                  |

## TYPICAL PERFORMANCE OF CURED MATERIAL

|                          |       |
|--------------------------|-------|
| Lap Shear Strength, psi: |       |
| Aluminum/Aluminum        | 2,100 |

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Carefully clean and dry all surfaces to be bonded.
2. Remove clamp and thoroughly mix the LOCTITE ABLESTIK FDA 22 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.
3. Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured.
4. Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
5. Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. A gentle warming cycle of 51°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results.

### Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

### Storage

The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

**Optimal Storage : 27 °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. Contents may separate during storage. Resin or hardener in bulk containers (e.g., quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

**Conversions**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\text{N} \times 0.225 = \text{lb}$   
 $\text{N/mm} \times 5.71 = \text{lb/in}$   
 $\text{psi} \times 145 = \text{N/mm}^2$   
 $\text{MPa} = \text{N/mm}^2$   
 $\text{N} \cdot \text{m} \times 8.851 = \text{lb} \cdot \text{in}$   
 $\text{N} \cdot \text{m} \times 0.738 = \text{lb} \cdot \text{ft}$   
 $\text{N} \cdot \text{mm} \times 0.142 = \text{oz} \cdot \text{in}$   
 $\text{mPa} \cdot \text{s} = \text{cP}$

**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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**Reference 1**