



# US2651

June 2011

## PRODUCT DESCRIPTION

US2651 provides the following product characteristics:

<b>Technology</b>	Urethane
Appearance (Part A)	Clear brown
Appearance (Part B)	Clear white
Appearance (cured)	Clear amber
Components	Two component - requires mixing
Mix Ratio, by volume - Part A: Part B	1 : 1
Mixing Ratio, by weight Part A: Part B	52.3 : 47.7
<b>Cure</b>	Room temperature cure
<b>Application</b>	Potting and Encapsulating

US2651 is an unfilled, low viscosity, reenterable potting and encapsulation compound. It can be used to encapsulate electronics for automotive applications including under-the-hood. The low glass transition temperature means that sensitive components are not damaged during low temperature exposure.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties

Density, @ 25 °C, g/cm <sup>3</sup>	1.0
Viscosity, Brookfield - RVF, 23 °C, cP: Spindle 2, speed 20 rpm	130

### Part B Properties

Density, @ 25 °C, g/cm <sup>3</sup>	0.92
Viscosity, Brookfield - RVF, 25 °C, cP: Spindle 2, speed 20 rpm	3,200

### Mixed Properties

Density, @ 25 °C, g/cm <sup>3</sup>	0.97
Working Time, 100 g mass, @ 23 °C, minutes	10
Gel Time, 100 gm mass @ @ 23 °C, minutes	25
Viscosity, Brookfield - RVF, 25 °C, cP: Spindle 2, speed 20 rpm	1,000

## TYPICAL CURING PERFORMANCE

### Recommended Cure Schedule

16 hours @ 23°C

### Alternative Cure Schedule

1 to 2 hours @ 65 to 85°C

The above cure profile is a guideline recommendation. 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:

Glass Transition Temperature, °C	-60
Coefficient of Linear Thermal Expansion, ppm/°C: Above Tg (-40 to 125°C)	197
Shore Hardness, Durometer OO	60
Shore Hardness, Durometer A	15
24 Hour Water Moisture Absorption, %	0.22
Weight Loss after 168hrs @ 105°C, %	0.47

### Electrical Properties:

Dielectric Strength, 20 mils thickness, volts/mil	1,050
Volume Resistivity, ohms-cm	5.3×10 <sup>11</sup>
Surface Resistivity, ohms	4.3×10 <sup>12</sup>
Dielectric Constant / Dissipation Factor @ 23°C:	
1 kHz	4.7 / 0.009
100 kHz	4.5 / 0.022

**REGULATORY NOTICE:** This product is regulated by the United State Department of Commerce and may not be exported without license from that Organization. See Material Safety Data Sheet for details

## GENERAL INFORMATION

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

### 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.

Note: Before using this product please purge approximately 30 ml. of material prior to application. Discard purged material in accordance with the Material Safety Data Sheet. A video instruction is available upon request.

### Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

**Liquid Storage - Liquids should be stored at 23°C or below, in closed containers. If stored below 23°C, the material MUST be allowed to come to room temperature, in the sealed container, to avoid moisture contamination.**

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.



**Conversions**

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

**Note**

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Reference 1.1