



# URALITE FH1271 A and B Data Sheet

August 2011

## Electronic Materials Conformal Coating

### Material Description

URALITE FH1271 A/B is a two-component, non-toxic, high solids, thermosetting polyurethane film. This material is used as an insulating compound for coating printed circuit assemblies.

FH1271 A/B is a resilient coating designed to protect against moisture, mold, dust, corrosion and other extreme environmental stresses. It is a low viscosity version of 1270 A/B.

### Features & Benefits

- Low viscosity, designed for spray coating.
- Well suited for coating SMT or through-hole printed circuit boards.
- Outstanding long term hydrolytic stability & electrical properties, for extended reliability life.
- Superior short-term humidity and 48-hour pressure cooker exposure testing.
- Non-conductive, non-corrosive
- High impact strength
- Adjustable mix ratio, (100:100) or (150:100) to increase solid content and lower viscosity.
- This material meets Raytheon Spec HMS 16-1847, Type II, Class 1, High solids conformal coating application.
- Contains UV tracer

### Alternative Mix Ratio

Material can be mixed by hand or with automated dispense system. Degassing of the mixed material required to reduce air bubbles.

Contact HB Fuller technical support for additional recommendations.

### Typical Properties

Physical Properties	Part A	Part B	Blend
Color	Yellow	Colorless	Yellow
Blending Ratio by Weight	100	100	
Gel time (83 grams, 25° C), hrs			>6
Solid Content (Non-Volatiles), TMWB052, %	50	60	55
Specific Gravity, D792/D1475	0.95	1.12	1.01
Tack-free Time, TMTS074, (93° C), mins			25-30
Viscosity, TMS001, cps.	16	300	35
Working pot life time after mixing, mins			75

### Typical Electrical Properties

Property	Test Method	Value
Dielectric Constant @ 1MHz	ASTM D-0150	3.40
Dielectric Strength, V/mil	ASTM D-0149	665
Dissipation factor @ 1 MHz	ASTM D-0150	0.0228
Volume resistivity, ohm-cm	ASTM D-0257	$1.8 \times 10^{16}$
Surface resistivity, ohm	ASTM D-0257	$1.7 \times 10^{17}$

### Curing Profile

Near ultimate physical properties are normally attained after 3 days at room temperature (25° C) full cure after 7 days. Curing of FH1271 A/B may be accelerated by heating for 2 to 3 hours at 80° C.



## TECHNICAL DATA SHEET

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### Storage & Shelf Life

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FH1271 A/B should be stored in a cool, dry place. Shelf life is a minimum of one year in unopened containers when stored at 25° C.

If compound is below 15°C, warm to 25° C before use.

Purge opened containers with dry air, or nitrogen inert blanketing gas before resealing.

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### Alternative Mix Ratio

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Part A is to be completely mixed with Part B by either manual stirring or with a power mixer. In either case minimal air should be entrapped. By using 150± 0.05% Part A by weight, a flexible, tough coating can be produced. If 100 parts "A" to 100 parts "B" are used, a harder, lower elongation coating is developed. The electrical properties are not affected to any great extent by the use of one or the other.

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### Application

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The solution will contain about 55% solids and is suitable for brush, dip or spray application. The coating should be used within 8 hours of preparation and unused material discarded after that period. Do not return any to containers. If lower viscosity is required the solution may be reduced with anhydrous toluene or xylene.

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### Clean Up

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Equipment, brushes, and spillage can be cleaned promptly after use with a mixture of anhydrous isopropyl alcohol and acetone that should be discarded after each use.

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### Health & Safety Precautions

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Please see the Material Safety Data Sheet (MSDS) for proper handling and disposal instructions.

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### Note

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The values noted in this data sheet are typical properties only and are not intended to be used as material specifications.

For assistance in writing a material specification please contact HB Fuller for future details.

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