

## CONATHANE® UF-3

CONATHANE UF-3 is a unique polyurethane foam characterized by low vapor pressure. CONATHANE UF-3 is unaffected by grease, oils, and most solvents. Also, it is ozone resistant, has excellent insulation characteristics, is dimensionally stable, and will not rot or mildew.

CONATHANE UF-3 is suggested for use in packaging electronic components and assemblies. When properly mixed and poured into a cavity, the liquid system expands to fill the void spaces and cures at room temperature. The foam adheres firmly to most clean surfaces and will reduce weight by as much as 75%. The foam has a uniform closed cell structure. Its low moisture absorbing characteristics make it an excellent moisture vapor barrier. The foam produced has a free-blown density of 7.6 pounds per cubic foot.

### TYPICAL PRODUCT CHARACTERISTICS

	Prepolymer PART A	Curative PART B
Color	Dark Amber	Clear
Specific Gravity @ 25°C	1.22	1.05
Brookfield Viscosity @ 25°C, cps	200	7500
Vapor Pressure, mm Hg @ 25°C	10 <sup>-3</sup>	---

### TYPICAL PROPERTIES OF CURED FOAM AT 25°C

The samples used in determining the physical and electrical properties were cured for one hour at 60°C. The following values are typical properties and are not meant to serve as specifications.

#### Physical Properties

Compressive Strength, psi	180
K-Factor (BTU/hr/sq. ft./F°/in.) thickness	0.26
Closed Cells, %	95
Water Absorption, %, 24 hour immersion @ 25°C	0.6
Density, lbs./cu.ft	7.6

#### Electrical Properties

Dielectric Constant @ 1 KHz @ 1 MHz	1.2 -1.2
Dissipation Factor @ 1 KHz @ 1 MHz	0.001 0.0003
Dielectric Strength, volts/mil	60

#### PROCESSING INSTRUCTIONS

The following procedure is recommended for preliminary evaluation:

- Part A and Part B should be adjusted to a temperature of 25 ± 2°C prior to mixing.
- Containers used for mixing should be glass, unlined metal, or polyethylene-coated paper.
- Mix Ratio by weight, (Part A/Part B) - 100/90
- Weigh the two components into separate containers, then pour together and mix thoroughly for 10-15 seconds using high-speed agitation. (High speed laboratory drill presses, fitted with a turbine or propeller-type agitator, have been used successfully.)
- Pour immediately into molds that have been coated with a CONAP® Mold Release and preheated to 30-40°C. Complete pouring within 30-40 seconds after mixing. Foaming is complete within approximately three minutes and the foam can be handled in 5 to 7 minutes. The volume increase is eight to ten fold.
- Cure for 2 to 3 hours at 25°C or 1 hour at 60°C.

CONATHANE UF-3 may also be handled easily in automatic processing equipment.

#### STORAGE AND HANDLING

Containers should be stored at 65°F-80°F and kept tightly sealed when not in use. Both components are packaged under dry nitrogen (CONAP® Dri-Purge) and should be flushed with dry nitrogen each time they are opened unless the contents are used within one day.

CONATHANE UF-3 Part A and Part B have shelf-life storage of 18 months from date of manufacture in original unopened containers.

**CAUTION:** Good industrial practice dictates that all material containing isocyanate groups should be mixed in an area provided with good ventilation and that ovens used for preheating and curing be vented to the atmosphere. Avoid skin contact with uncured materials by using protective skin creams and gloves. If contact does occur, wash immediately with clean denatured alcohol, soap, and hot water.

## AVAILABILITY

CONATHANE UF-3 is available in quart, gallon, 5-gallon, and 55-gallon drum units. Standard units are supplied as pre-weighed quantities of Part A and Part B packaged in individual containers.

An EVALUATION KIT is available at a nominal cost.

### CAUTION

Responsible handling of Cytec products requires a thorough preview of safety, health, and environmental issues prior to use. Review the Material Safety Data Sheets(s) for the specific Cytec product(s) and container label information before opening containers. Ensure that employee exposure issues are understood, communicated to all workers, and controls are in place to prevent exposures above Permissible Exposure Limits (P.E.L.'s). Review safety and environmental issues to be certain controls are in place to prevent injury to employees, the community, or the environment, and ensure compliance with all applicable Federal, State, and Local laws and regulations. For assistance in this review process, please call your Cytec representative or our office noted below.

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