



## **Incythane 500**

### **ARCHITECTURAL SPECIFICATIONS FOR STUD-CAVITY INSULATION**

#### **PART 1 ---- GENERAL**

##### **1.01 SUMMARY**

Incythane 500 provides building envelopes with seamless insulation which substantially reduces air infiltration. Incylthane 500 can be applied to the full thickness of stud-wall cavities for a total insulation/air barrier package. Air infiltration is substantially reduced due to the sealing characteristics of the spray foam system and eliminates the need of house wrap.

##### **1.02 QUALITY ASSURANCE**

Incythane 500 must be installed by a qualified spray polyurethane foam applicator who is familiar with the operation and maintenance of his equipment and who is familiar with the properties of the Incylthane Spray System which is being applied.

##### **1.03 MATERIAL DELIVERY AND STORAGE**

- A. Materials shall be delivered in their original, tightly sealed containers.
- B. Keep the temperature of the chemicals above the 65° F for several days prior to use. Cold chemicals can cause pump cavitation and, therefore, incorrect metering.

## Incythane 500 Specifications

Storage temperatures should not exceed 100° F. Do not store in direct sunlight. Keep drums tightly closed when not in use and under dry gas pressure of 2-3 psi after they have been opened. Under proper storage conditions, shelf life of Incylthane Spray Systems with Incylthane 500 are three months.

### 1.04 SEQUENCE AND SCHEDULING

The spray polyurethane foam used in the Incylthane 500 system is applied after the perimeter wall is in place, windows and doors installed, and rough-in plumbing and electrical inspections are complete.

1.05 VAPOR BARRIER: Install vapor barriers as required by local code.

### 1.06 SAFETY

- A. HANDLING OF LIQUID COMPONENTS: Use caution in removing bungs from 55-gallon drums. Loosen 3/4 inch bung and let gas escape before completely removing. Avoid breathing vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to “MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal,” published by the Society of Plastics Industry, 355 Lexington Ave, New York, NY.
- B. 15-MINUTE THERMAL BARRIER: Federal, state, and local building codes vary. All require that spray-applied polyurethane foam insulation be covered with an approved 15-minute fire rated thermal barrier. One typically approved material is 1/2-inch gypsum wallboard (sheetrock) applied over the spray polyurethane foam insulation. However, always check with local officials for recommendations and approvals.

Incythane 500 Specifications

PART 2 --- PRODUCTS

2.01 POLYURETHANE FOAM

The polyurethane foam used shall be Incylthane 500. Typical physical properties of foam made with this System are:

Property	Incythane 500
Core Density	0.5 lb/ft <sup>3</sup>
Permeance at 3 1/2" thickness	7.7 perms
Thermal Conductivity (k)*	0.28 Btu•in/hr•ft <sup>2</sup> •°F
Flame Spread (4"thick)**	25
Smoke Developed**	<450

R\* Value

Thickness (inches)	R Value (°F•hr•ft <sup>2</sup> /Btu)
3.5	12

\*As with all insulating materials, the k Factor and R Value will vary with age and use conditions.

\*\*These numerical flame spread ratings and smoke developed numbers are not intended to reflect hazards presented by this or any other material under actual fire conditions. For proper use refer to the appropriate building code.

2.02 ACCESSORIES

A. Joint filler Foam: Hilti CF 124 Filler Foam or equivalent

B. Caulk: Sikaflex 1a: Single component polyurethane or equivalent

Incyllthane 500 Specifications

PART 3 – EXECUTION

3.01 SURFACE PREPARATION

All surfaces to be sprayed with Incylthane 500 polyurethane must be dry, clean, and secure. Remove sawdust and other debris from areas to be sprayed by blowing with compressed air or vacuuming with a shop vacuum. Check surfaces with Incylthane MDP strips to verify dryness. All metal to which foam is to be applied must be free of oil, grease, rust, etc. Primers should be used where necessary.

Mask off all areas not to receive spray foam with masking tape and plastic sheeting. Apply release agent to stud facing to facilitate removal of foam.

3.02 FOAM APPLICATION

Incyllthane 500 is a fast rise foam system. The foam is applied in one pass to completely fill the stud wall cavity. Use a spray technique whereby the stud faces are thinly sprayed with foam chemicals to assure adhesion to the studs. The resulting foam pass would be “U” shaped with rapid gun sweeps across the stud faces.

Where Incylthane 500 is applied between joists (below a floor or above a ceiling), apply sufficient foam thickness to achieve the desired R-Value (the cavity does not need to be completely filled).

3.03 ACCESSORY APPLICATION

Joint filler Foam and Caulk: Use joint filler foam and/or/ caulk to seal around windows, door chimneys, electrical raceways, sill plates, multiple studs, etc.

**Caution: Joint filler foam can tighten window frames and door jambs to the point that they will not open or close properly. Care must be used in these areas to avoid distortion of these members.**

3.04 CLEAN UP

Clean off all overspray and overfill from interior stud facings. Where stud cavities have been overfilled, shave off the foam face to provide surface flush with the stud for drywall installation. Remove all masking materials.