



## **GUIDE SPECIFICATIONS FOR CEMENTITIOUS FOAM INSULATION**

**NOTE TO SPECIFIER:** The following is a guide specification for an ultra light foamed cementitious product of a density and formulation that offers a maximum of thermal efficiency.

### **PART 1 - GENERAL**

#### **1.01 Work Included**

A. Work under this section consists of furnishing of all labour, materials and equipment necessary for or incidental to the complete and proper installation of all cementitious foamed insulation as shown on the drawings or specified herein, all in accordance with the contract documents.

B. Material and installation shall conform to applicable building code requirements of all authorities having jurisdiction.

#### **1.02 Related Work**

A. See PART 3

#### **1.03 Quality Assurance**

A. Contractor is a licensed installer of air krete.

B. Contractor shall furnish evidence of training, experience and approval of manufacturer.

C. Contractor shall furnish certifications that materials used are fireproof, inorganic and free of carcinogenic mineral fibres or toxic substances.

#### **1.04 Delivery, Storage and Handling**

A. Materials shall be delivered to the site in clearly labelled containers and mixed in strict accordance with the manufacturer's directions.

B. Materials shall be protected from the weather and other damage.



C. Damaged materials found unsuitable for use will be rejected and shall be removed from the site.

### **1.05 Project, Site Conditions**

A. air krete shall be installed when the combination of indoor and outdoor temperatures is such that the temperature at point of application is 40°F (4.5°C) and rising during the application process and 48 hour initial curing.

B. If necessary for job progress, provide enclosures with heat to maintain temperatures through initial curing.

C. Provide natural ventilation to properly cure the foamed insulation during and subsequent to its application.

### **1.06 Cleaning**

A. After completion of insulation work in an area, equipment shall be removed and all surfaces shall be cleaned of all deposits of insulation material.

## **PART 2 - PRODUCTS**

### **2.01 Materials**

A. Cementitious Foam Insulation: shall be air krete, foamed to a density of 2.07 lbs/cu ft  $\pm 6\%$  so as to produce an R value of 3.9 per inch of thickness as measured by ASTM C518-76 @ 75°F.

B. Retention Fabric: shall be 18 x 14 mesh aluminium screening or other material sufficiently porous to permit curing of insulation and sufficiently rigid to prevent deformation.

C. Vapour Barrier (if required): shall be 6 mil polyethylene film or other suitable material impervious to moisture.

D. Attachments: shall provide support and protection to fabric and insulation without failure under conditions of use.



## PART 3 - EXECUTION

### 3.01 Preparatory Work

A. Work of other trades: verify by inspection and with the general contractor that preparatory work specified in Divisions 4, 5, 6, 15 and 16 has been properly done, i.e. that masonry block cores and cavities are free of debris and excess mortar droppings, that stud spaces are accessible, free of debris and contain all scheduled pipes, conduits and non-heat producing devices and that heat-producing devices and elements that are not inherently fireproof are shielded such that insulation will be held 3" away.

B. Protection: Provide drop cloths, masking or other protection as required to prevent damage to adjacent surfaces and equipment.

### 3.02 Application

A. Mixing: Component materials shall be mixed using the quantities, proportions and the pressures called for in the manufacturer's specifications for the purpose intended.

B. Masonry, new: Completely fill block cores and cavities between wythes in lifts not to exceed 8'-0".

C. Masonry, retrofit: Access between wythes with holes large enough to accommodate hose, at 4'-0"; on center each way; fill cavities completely; plug holes with non-shrink mortar to match existing. Consult manufacturer for retrofit core filling.

D. Stud spaces, new: Apply retention fabric, attaching as required to prevent sagging or deformation; foam stud cavity completely full, leave interior finish (or vapour barrier when required) off until foam has initially cured.

E. Stud spaces, retrofit: Access spaces 12'-0" or less in height at a point two-thirds of their height above their bottom. Taller spaces shall be accessed such that no lift of **air krete** exceeds 8'-0". Fill spaces completely, plug holes after foaming with material to match existing.

F. Ceiling spaces: Fill to depth shown in a manner similar to that specified for stud spaces. If a vapour barrier is required, it may be used as a combination vapour barrier and retention fabric only if the construction permits air curing from above. If not, a separate retention fabric must be used with the vapour barrier applied and sealed only after curing.



G. Pipe chases; fill completely after all required inspections and tests have been performed.

H. Fireproofing, very high temperature, sound deadening and encapsulation applications: consult manufacturer.

### **3.03 Field Quality Control**

A. Density: Contractor shall conduct a timed, field density check at the beginning, middle and end of each days application. Check shall be done in accordance with the manufacturer's instructions and log of results maintained for the architect's review.

B. Continuity: At the architect's discretion, an infrared thermographic test may be required. If the test proves the installation is satisfactory, its cost will be borne by the owner. If the test shows discontinuity, its cost and the cost of achieving continuity shall be borne by the contractor.