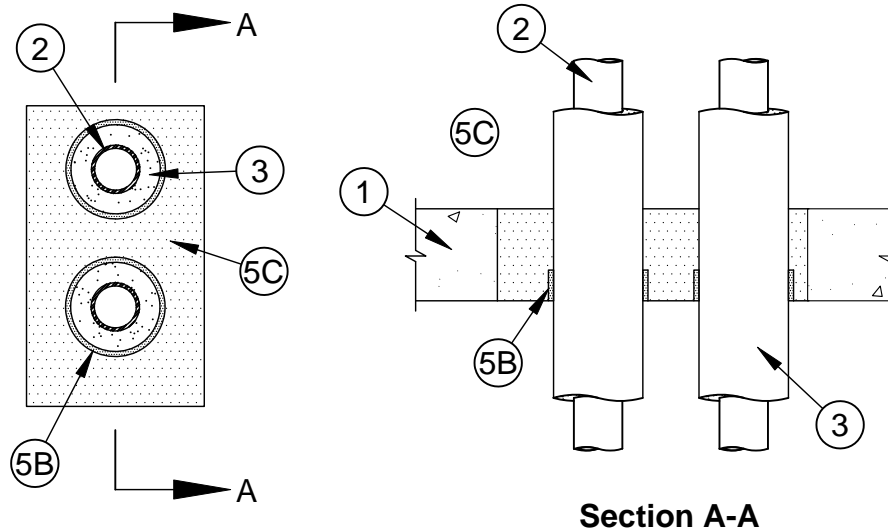




System No. C-AJ-5051

F Rating - 3 Hr

T Ratings - 3/4 and 2 Hr (See Items 3 and 4)



Section A-A

1. **Floor or Wall Assembly** - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 128 sq in. with max dimension of 16 in.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Through-Penetrants** - A max of two pipes or tubes to be installed within the opening. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. **Steel Pipe** - Nom 2 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - B. **Iron Pipe** - Nom 2 in. diam (or smaller) cast or ductile iron pipe.
 - C. **Copper Tubing** - Nom 2 in. diam (or smaller) Type L (or heavier) copper tubing.
 - D. **Copper Pipe** - Nom 2 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **Pipe and Equipment Covering - Materials*** - Nom 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt type supplied with the product. Pipe covering material to be installed on one or both pipes or tubes. Annular space between insulated pipe and periphery of opening may range from a min 1 in. to max 2-3/4 in. If the pipe covering material is installed on both pipes or tubes, the "T" Rating is 2 h.

See **Pipe and Equipment Covering - Materials** - (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. **Tube Insulation - Plastics+** - As an alternate to the pipe covering (Item 3) nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on one or both of the metallic pipe or tubes. Insulated pipes shall be spaced a nom 2-3/4 in. apart. Annular space between insulated pipe and periphery of opening shall range from a min 1-1/4 in. to a max 2-3/4 in. If the tube insulation is installed on one or both pipes or tubes, the "T" Rating is 3/4 h.

See **Plastics+** (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.



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C-AJ-5051
PAGE 1 OF 2

- A. **Pipe Covering Materials*** (Not Shown) - As an alternate to Item Nos. 3 or 4, nom 1 in. thick unfaced mineral fiber pipe insulation having a nom density of 3.5 pcf (or heavier) and sized to the outside diam of pipe or tube. Pipe insulation secured with min 8 AWG steel wire spaced max 12 in. OC. Annular space between insulated pipe and periphery of opening shall range from a min of 1 in. to a max of 2-3/4 in. If the pipe covering material is installed on both pipes or tubes the T Rating is 2 h.

OWENS CORNING HT INC, DIV OF

OWENS CORNING - High Temperature Pipe Insulation 1200, High Temperature Pipe Insulation BWT or High Temperature Pipe Insulation Thermaloc

- B. **Sheathing Material*** (Not Shown) - Used in conjunction with Item 4A. Foil-scrim-kraft or all service jacket material shall be wrapped around the outer circumference of the pipe insulation (Item 4A) with the kraft side exposed. Longitudinal joints and transverse joints sealed with metal fasteners or butt tape.

See **Sheathing Materials** (BVDV) category in the Building Materials Directory for names of manufacturers. Any sheathing material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

5. **Firestop System** - The firestop system shall consist of the following:

- A. **Forms** (Not shown) - Used as a form to prevent leakage of fill material during installation. Forms to be a rigid sheet material, cut to fit the contour of the penetrating item and fastened to the underside of floor or both sides of wall. Forms to be removed after fill material has cured.
- B. **Fill, Void or Cavity Material* - Wrap Strip** - Nom 1/4 in. thick intumescent material faced on both surfaces with a plastic film, supplied in 2 in. wide strips. Wrap strip is wrapped around the pipe with ends butted and held in place with min No. 18 SWG steel wire. The bottom edge of the wrap strip shall be installed flush with bottom surface of the floor. In wall assemblies, the wrap strip is installed on each side of the wall, flush with each surface.

SPECIFIED TECHNOLOGIES INC - SpecSeal BLU Wrap Strip

- C. **Fill, Void or Cavity Material* - Mortar** - Min 4-1/2 in. thickness of fill material installed flush with both surfaces of floor or wall. Mortar to be mixed at a rate of 1.5 parts dry mixture to one part water by weight in accordance with the fill material manufacturer's installation instructions.

SPECIFIED TECHNOLOGIES INC - SpecSeal Mortar

*Bearing the UL Classification Marking

+Bearing the UL Recognition Marking



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C-AJ-5051
PAGE 2 OF 2