

SYSTEM N° C-AJ-2574
XHEZ.C-AJ-2574
THROUGH-PENETRATION FIRESTOP SYSTEMS

DESIGN/SYSTEM/CONSTRUCTION/ASSEMBLY USAGE DISCLAIMER:

- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED IN ALL CASES AS TO THE PARTICULAR REQUIREMENTS COVERING THE INSTALLATION AND USE OF UL CERTIFIED PRODUCTS, EQUIPMENT, SYSTEM, DEVICES, AND MATERIALS.
- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED BEFORE CONSTRUCTION.
- FIRE RESISTANCE ASSEMBLIES AND PRODUCTS ARE DEVELOPED BY THE DESIGN SUBMITTER AND HAVE BEEN INVESTIGATED BY UL FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS. THE PUBLISHED INFORMATION CANNOT ALWAYS ADDRESS EVERY CONSTRUCTION NUANCE ENCOUNTERED IN THE FIELD.
- WHEN FIELD ISSUES ARISE, IT IS RECOMMENDED THE FIRST CONTACT FOR ASSISTANCE BE THE TECHNICAL SERVICE STAFF PROVIDED BY THE PRODUCT MANUFACTURER NOTED FOR THE DESIGN. USERS OF FIRE RESISTANCE ASSEMBLIES ARE ADVISED TO CONSULT THE GENERAL GUIDE INFORMATION FOR EACH PRODUCT CATEGORY AND EACH GROUP OF ASSEMBLIES. THE GUIDE INFORMATION INCLUDES SPECIFICS CONCERNING ALTERNATE MATERIALS AND ALTERNATE METHODS OF CONSTRUCTION.
- ONLY PRODUCTS WHICH BEAR UL'S MARK ARE CONSIDERED CERTIFIED.

SYSTEM N° C-AJ-2574
F RATING 2 HR
T RATING 0 HR
L RATING AT AMBIENT LESS THAN 1 CFM/SQ FT
L RATING AT 400 F LESS THAN 1 CFM/SQ FT
W RATING CLASS 1 (SEE ITEM 4B)

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. SEE TABLE UNDER ITEM 3B FOR MAX DIAM OF OPENING.

SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. STEEL SLEEVE – (OPTIONAL) – MIN SLEEVE DAM NOT TO EXCEED MAX OPENING SIZE SPECIFIED UNDER TABLE IN ITEM 3B. SLEEVE SHALL BE SCHEDULE 10 (OR HEAVIER) STEEL PIPE OR MIN NO. 26 OR (0.022 IN. OR 0.56 MM THICK) SHEET STEEL SLEEVE WITH SQUARE ANCHOR FLANGE SPOT WELDED TO THE SLEEVE AT APPROX MID-HEIGHT. STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES.

3. THROUGH PENETRANTS – ONE NONMETALLIC PIPE OR CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE TUBING AND THE EDGE OF THE OPENING SHALL BE MIN 1/8 IN. TO (3.2 MM) MAX 1/4 IN. (6 MM) PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES OF PIPE OR CONDUIT MAY BE USED:

A) POLYVINYL CHLORIDE (PVC) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 SOLID CORE OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

B) CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SDR17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

C) RIGID NONMETALLIC CONDUIT+ – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NECA NO. 70).

D) ELECTRICAL NONMETALLIC CONDUIT + – NOM 4 IN. (102 MM) DIA (OR SMALLER) PVC TUBING INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NECA NO. 70).

4. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A) FILL, VOID OR CAVITY MATERIAL+ – WRAP STRIP – SEE TABLE UNDER ITEM 3B FOR MIN SIZE OF INTUMESCENT WRAP STRIP. THE WRAP STRIP IS CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE ONCE AND SLD INTO THE ANNULAR SPACE AND HELD IN PLACE WITH A LAYER OF ALUMINUM FOIL TAPE. THE BOTTOM EDGE OF THE WRAP STRIP SHALL BE RECESSED MAX 1/2 IN. (13 MM) FROM THE BOTTOM SURFACE OF THE CONCRETE FLOOR. IN WALLS, THE WRAP STRIP SHALL BE INSTALLED ON BOTH SIDES OF THE WALL SUCH THAT THE EXPOSED EDGE OF THE WRAP STRIP IS RECESSED 1/4 IN. (6 MM) FROM EACH SIDE OF THE WALL.

SPECIFIED TECHNOLOGIES INC – SPECIAL, SSW125, SSW250, OR SSW375 WRAP STRIP.

B) FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/4 IN. (6 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL.

SPECIFIED TECHNOLOGIES INC – SPECIAL, SERIES SSS SEALANT, SPECIAL, LD SEALANT, PENSL 300 SEALANT OR SPECIAL, SERIES SL300 SEALANT FOR FLOORS OR WALLS AND PENSL 300 SEALANT OR SPECIAL, SERIES SL300SL SEALANT FOR FLOORS ONLY.

W RATING APPLIES ONLY WHEN PENSL 300, SPECIAL, SERIES SL300, PENSL 300 S/L OR SPECIAL, SERIES SL300SL SEALANTS ARE USED.

NOM PIPE DIAM, IN (MM)	WRAP STRIP	WRAP STRIP SIZE, THICK, X WIDTH, IN. (MM)	MAX DIAM OF OPENING, IN. (MM)	ANNULAR SPACE IN. (MM)	
				MIN	MAX
2 (51)	SSW125	1/8 x 1-1/2 (3 x 38)	3 (76)	1/8 (3)	1/2 (13)
3 (76)	SSW250	1/4 x 1-1/2 (6 x 38)	5 (127)	3/8 (10)	1-1/8 (29)
4 (102)	SSW375	3/8 x 1-1/2 (9.6 x 38)	6 (152)	3/8 (10)	1-1/8 (29)

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

SYSTEM N° C-AJ-2207
XHEZ.C-AJ-2207
THROUGH-PENETRATION FIRESTOP SYSTEMS

DESIGN/SYSTEM/CONSTRUCTION/ASSEMBLY USAGE DISCLAIMER:

- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED IN ALL CASES AS TO THE PARTICULAR REQUIREMENTS COVERING THE INSTALLATION AND USE OF UL CERTIFIED PRODUCTS, EQUIPMENT, SYSTEM, DEVICES, AND MATERIALS.
- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED BEFORE CONSTRUCTION.
- FIRE RESISTANCE ASSEMBLIES AND PRODUCTS ARE DEVELOPED BY THE DESIGN SUBMITTER AND HAVE BEEN INVESTIGATED BY UL FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS. THE PUBLISHED INFORMATION CANNOT ALWAYS ADDRESS EVERY CONSTRUCTION NUANCE ENCOUNTERED IN THE FIELD.
- WHEN FIELD ISSUES ARISE, IT IS RECOMMENDED THE FIRST CONTACT FOR ASSISTANCE BE THE TECHNICAL SERVICE STAFF PROVIDED BY THE PRODUCT MANUFACTURER NOTED FOR THE DESIGN. USERS OF FIRE RESISTANCE ASSEMBLIES ARE ADVISED TO CONSULT THE GENERAL GUIDE INFORMATION FOR EACH PRODUCT CATEGORY AND EACH GROUP OF ASSEMBLIES. THE GUIDE INFORMATION INCLUDES SPECIFICS CONCERNING ALTERNATE MATERIALS AND ALTERNATE METHODS OF CONSTRUCTION.
- ONLY PRODUCTS WHICH BEAR UL'S MARK ARE CONSIDERED CERTIFIED.

SYSTEM N° C-AJ-2207
F RATING 2 AND 3 HR (SEE ITEM 2)
T RATINGS 1/4, 2 AND 3 HR (SEE ITEM 2)
L RATING AT AMBIENT LESS THAN 1 CFM/SQ FT
L RATING AT 400 F 3 CFM/SQ FT

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 5 IN.

SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. THROUGH PENETRANTS – ONE NONMETALLIC PIPE OR CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE TUBING AND THE EDGE OF THE OPENING SHALL BE MIN 1/8 IN. TO (3.2 MM) MAX 1/4 IN. (6 MM). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES OF PIPE OR CONDUIT MAY BE USED:

A) POLYVINYL CHLORIDE (PVC) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 SOLID CORE OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM.

B) CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SDR17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

C) RIGID NONMETALLIC CONDUIT+ – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NECA NO. 70).

D) ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 SOLID CORE OR CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

E) FIRE RETARDANT POLYPROPYLENE (FRPP) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 FRPP PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

F) POLYVINYL CHLORIDE-XFR (PVC-XFR) PIPE – NOM 4 IN. (102 MM) DIA (OR SMALLER) SCHEDULE 40 SOLID CORE PVC-XFR PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

G) CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE – NOM 3 IN. (76 MM) DIA (OR SMALLER) SDR11 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

IFEX INC AQUARISE

F AND T RATINGS ARE 2 HR FOR PVC-XFR PIPES. T RATING FOR ITEM G IS 1/4 HR.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A) FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/4 IN. (6 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY.

NUCO INC SELF SEAL GG-200, SELF SEAL GG-266

B) FIRESTOP DEVICE – COLLAR – COLLAR TO BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. COLLAR TO BE INSTALLED AND LATCHED AROUND PIPE AND SECURED TO BOTH SIDES OF WALL WITH MIN 1/4 IN. (6 MM) DIAM BY MIN 1-1/4 IN. (32 MM) LONG STEEL CONCRETE ANCHORS IN CONJUNCTION WITH STEEL NUTS AND MIN 1-1/4 IN. (32 MM) DIAM STEEL FENDER WASHERS. MIN OF TWO, THREE OR FOUR ANCHOR BOLTS, SYMMETRICALLY LOCATED, FOR NOM 1-1/2 AND 2 IN. (38 AND 51 MM) DIAM, NOM 3 IN. (76 MM) DIAM AND NOM 4 IN. (102 MM) DIAM PIPES, RESPECTIVELY.

NUCO INC SELF SEAL SSC COLLAR.

*Bearing the UL Classification Marking
*Bearing the UL Listing Mark

SYSTEM N° C-AJ-2104
XHEZ.C-AJ-2104
THROUGH-PENETRATION FIRESTOP SYSTEMS

DESIGN/SYSTEM/CONSTRUCTION/ASSEMBLY USAGE DISCLAIMER:

- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED IN ALL CASES AS TO THE PARTICULAR REQUIREMENTS COVERING THE INSTALLATION AND USE OF UL CERTIFIED PRODUCTS, EQUIPMENT, SYSTEM, DEVICES, AND MATERIALS.
- AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED BEFORE CONSTRUCTION.
- FIRE RESISTANCE ASSEMBLIES AND PRODUCTS ARE DEVELOPED BY THE DESIGN SUBMITTER AND HAVE BEEN INVESTIGATED BY UL FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS. THE PUBLISHED INFORMATION CANNOT ALWAYS ADDRESS EVERY CONSTRUCTION NUANCE ENCOUNTERED IN THE FIELD.
- WHEN FIELD ISSUES ARISE, IT IS RECOMMENDED THE FIRST CONTACT FOR ASSISTANCE BE THE TECHNICAL SERVICE STAFF PROVIDED BY THE PRODUCT MANUFACTURER NOTED FOR THE DESIGN. USERS OF FIRE RESISTANCE ASSEMBLIES ARE ADVISED TO CONSULT THE GENERAL GUIDE INFORMATION FOR EACH PRODUCT CATEGORY AND EACH GROUP OF ASSEMBLIES. THE GUIDE INFORMATION INCLUDES SPECIFICS CONCERNING ALTERNATE MATERIALS AND ALTERNATE METHODS OF CONSTRUCTION.
- ONLY PRODUCTS WHICH BEAR UL'S MARK ARE CONSIDERED CERTIFIED.

SYSTEM N° C-AJ-2104
F RATING 2 HR
T RATING 0 HR
L RATING AT AMBIENT LESS THAN 1 CFM/SQ FT
L RATING AT 400 F LESS THAN 1 CFM/SQ FT
W RATING CLASS 1 (SEE ITEM 3B)

SECTION A-A

1. FLOOR OR WALL ASSEMBLY – MIN 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE FLOOR OR MIN 5 IN. (127 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. THROUGH PENETRANTS – ONE NONMETALLIC PIPE TO BE COVERED WITHIN THE FIRESTOP SYSTEM. A MIN ANNULAR SPACE OF 1/8 IN. (3 MM) TO 11/16 IN. (17 MM) IS REQUIRED WITHIN THE FIRESTOP SYSTEM (SEE ITEM 4). PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES MAY BE USED:

A) POLYVINYL CHLORIDE (PVC) PIPE – NOM 8 IN. (203 MM) DIA (OR SMALLER) SCHEDULE 40 PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

B) FLAME RETARDANT POLYPROPYLENE (FRPP) PIPE – NOM 8 IN. (203 MM) DIA (OR SMALLER) SCHEDULE 40 FRPP PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

C) CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE – NOM 8 IN. (203 MM) DIA (OR SMALLER) SDR 13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.

D) RIGID NONMETALLIC CONDUIT+ – NOM 6 IN. (152 MM) DIA (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NECA NO. 70).

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A) PACKING MATERIAL – MIN 4 IN. (102 MM) THICKNESS OF 4 PPT (64 KG/M3) MINERAL WOOL PACKING PROVED INTO OPENING AS A PERMANENT FORM PACKING MATERIAL TO BE RECESSED FROM TOP SURFACES OF FLOOR OR BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B) FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. (13 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.

SPECIFIED TECHNOLOGIES INC – SPECIAL, SERIES SSS SEALANT, SPECIAL, LD SEALANT, PENSL 300 SEALANT OR SPECIAL, SERIES SL 300 SEALANT FOR FLOORS AND WALLS AND PENSL 300 SL SEALANT OR SPECIAL, SERIES SL 300SL SEALANT FOR FLOORS ONLY. W RATING APPLIES ONLY WHEN PENSL 300, SPECIAL, SERIES SL 300, PENSL 300 S/L OR SPECIAL, SERIES SL 300SL SEALANTS ARE USED.

C) ALUMINUM FOIL TAPE – (NOT SHOWN) – NOM 3 IN. (76 MM) THICK PRESSURE SENSITIVE ALUMINUM FOIL TAPE WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE THROUGH PENETRANT WITH 4 IN. (102 MM) WIDE OVERLAP ALONG ITS PERIMETER. FOIL TAPE SHALL BEAT AGAINST THE BOTTOM SURFACE OF THE CONCRETE FLOOR OR BOTH SURFACES OF THE WALL AND EXTEND A MIN 5 IN. (127 MM) BELOW THE BOTTOM SURFACE OF THE CONCRETE FLOOR OR BOTH SURFACES OF THE WALL.

D) FILL, VOID OR CAVITY MATERIAL+ – WRAP STRIP – NOM 1/8 IN. (3.2 MM) OR 3/16 IN. (4.8 MM) THICK INTUMESCENT MATERIAL FACED ON BOTH SIDES WITH A PLASTIC FILM, SUPPLIED IN 2 IN. (51 MM) WIDE STRIPS. IN FLOOR ASSEMBLIES, TWO STACKS OF WRAP STRIPS ARE INDIVIDUALLY WRAPPED AROUND THE THROUGH PENETRANT WITH THE ENDS BUTTED AND HELD IN PLACE WITH WIGGING TAPE. BUTTED ENDS IN SUCCESSIVE LAYERS MAY BE ALIGNED OR OFFSET. THE EDGE OF THE WRAP STRIPS SHALL ABUT THE SURFACE OF THE CONCRETE FLOOR OR WALL. IN FLOOR ASSEMBLIES, THE TWO STACKS OF WRAP STRIPS ARE INSTALLED ON THE BOTTOM SIDE OF THE CONCRETE FLOOR. IN WALL ASSEMBLIES, THE TWO STACKS OF WRAP STRIPS ARE INSTALLED ON EACH SIDE OF THE CONCRETE WALL. THE NUMBER OF LAYERS OF WRAP STRIPS PER STACK IS DEPENDENT UPON THE DIAM. OF THE THROUGH-PENETRANT AS TABULATED BELOW.

DIAM OF THROUGH PENETRANT, IN (MM)	LAYERS OF WRAPS STRIP PER STACK
6 (152)	3
8 (203)	4

SPECIFIED TECHNOLOGIES INC – Specified BBU Wrap Strip or Specified BUUZ Wrap Strip

E) STEEL COLLAR – COLLAR FABRICATED FROM COILS OF F5020 (0.020 IN. (0.7 MM) THICK (NO. 22 MSG) GALV SHEET STEEL AVAILABLE FROM WRAP STRIP MANUFACTURER. COLLAR SHALL BE NOM 4 IN. (102 MM) DEEP WITH MIN 3/4 IN. (19 MM) DIA AND BE 2 IN. (51 MM) LONG AND AFR FOR ATTACHMENT TO THE CONCRETE FLOOR OR WALL. RETENER DIA. 3/4 IN. (19 MM) WIDE THROUG HOLES TO 3/8 IN. (9.5 MM) WIDE AND LOCATED OPPOSITE THE ANCHOR TAGS ARE LOCATED 90 DEGREES TOWARD THE THROUGH PENETRANT SURFACE TO MAINTAIN THE ANNULAR SPACE AROUND THE PIPE AND TO RETAIN THE WRAP STRIPS. STEEL COLLAR WRAPPED AROUND WRAP STRIPS AND THROUGH PENETRANT WITH A 1 IN. (25 MM) WIDE OVERLAP ALONG ITS PERIMETER. COLLAR STEEL TAPPED AROUND WRAP STRIPS AND THROUGH PENETRANT USING MIN 1/2 IN. (13 MM) WIDE BY 100 IN. (2540 MM) THICK STAINLESS STEEL HOSE CLAMP SPACED 2 IN. (51 MM) OR COLLAR SECURED TO CONCRETE SURFACE WITH 1/4 IN. (6 MM) DIA BY MIN 1-1/4 IN. (32 MM) LONG STEEL CONCRETE SPOKES IN CONJUNCTION WITH MIN 1 IN. (25 MM) DIA STEEL FENDER WASHERS AS AN ALTERNATE TO THE STEEL CONCRETE SPOKES. NOM 1-1/4 IN. (32 MM) LONG STEEL POWER ACTUATED FASTENERS PROVIDED WITH 3/4 IN. (19 MM) DIA STEEL WASHERS MAY BE USED TO SECURE DEVICE.

4. FIRESTOP DEVICE – (NOT SHOWN) AS AN OPTION TO THE WRAP STRIP AND THE STEEL COLLAR (ITEM NOS. 3D AND 3E), A FIRESTOP DEVICE CONSISTING OF STEEL COLLAR LINED WITH AN INTUMESCENT MATERIAL, USED TO TO THE THROUGH PENETRANT. THE THROUGH PENETRANT MAY BE USED FOR NONMETALLIC THROUGH PENETRANTS HAVING A NOM DIA OF 6 IN. (152 MM) OR LESS. DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. IN FLOORS, THE DEVICE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE CONCRETE FLOOR. IN WALL ASSEMBLIES, THE DEVICE SHALL BE INSTALLED ON EACH SIDE OF THE CONCRETE WALL. DEVICE SHALL BE SECURED TO CONCRETE SURFACE WITH 1/4 IN. (6 MM) DIA BY MIN 1-1/4 IN. (32 MM) LONG STEEL CONCRETE SPOKES IN CONJUNCTION WITH MIN 1 IN. (25 MM) DIA STEEL FENDER WASHERS AS AN ALTERNATE TO THE STEEL CONCRETE SPOKES. NOM 1-1/4 IN. (32 MM) LONG STEEL POWER ACTUATED FASTENERS PROVIDED WITH 3/4 IN. (19 MM) DIA STEEL WASHERS MAY BE USED TO SECURE DEVICE.

SPECIFIED TECHNOLOGIES INC – SPECIAL, FIRESTOP COLLAR, SPECIAL, LDC COLLAR OR SPECIAL, SSC COLLAR. WHEN SPECIAL, LDC COLLAR OR SPECIAL, SSC COLLAR ARE USED, THE MIN ANNULAR SPACE SHALL BE 1/8 IN. (3 MM) FOR MAX 2-1/2 IN. (64 MM) DIA PIPE OR CONDUIT AND SHALL BE MAX 1/4 IN. (6 MM) FOR PIPE OR CONDUIT UNDER THAN 2-1/2 IN. (64 MM) DIA.

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

SYSTEM N° C-AJ-2104
F RATING 2 HR
T RATING 0 HR
L RATING AT AMBIENT LESS THAN 1 CFM/SQ FT
L RATING AT 400 F LESS THAN 1 CFM/SQ FT
W RATING CLASS 1 (SEE ITEM 3B)

SECTION A-A

1. Floor or Wall Assembly – Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants – One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be 0 in (point contact) to max 1-1/4 in. The following types and sizes of metallic pipes, conduits or tubing may be used:

A) Steel Pipe – Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B) Conduit – Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

C) Copper Tubing – Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

D) Copper Pipe – Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Packing Material – Min 3 in. thickness of min 4 pcf mineral wool batt insulation for nom 4 in. diam (or smaller) pipes, conduits or tubings and a min 4 in. thickness of min 4 pcf mineral wool batt insulation for pipe greater than nom 4 in. diam, firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

4. Fill, Void or Cavity Material+ – Sealant – Min 1/2 in. thickness of fill material applied within the annulus, flush with the top surface of floor or both surfaces of wall. At the point of contact location between pipe and concrete, a min 1/2 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – CP601S, CP606 or FS-ONE Sealant.

(Note: L Ratings apply only when FS-ONE Sealant is used).

*Bearing the UL Classification Marking

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-1149
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 4 CFM/sq ft

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants – One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be 0 in (point contact) to max 1-1/4 in. The following types and sizes of metallic pipes, conduits or tubing may be used:

A) Steel Pipe – Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B) Conduit – Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

C) Copper Tubing – Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

D) Copper Pipe – Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Packing Material – Min 3 in. thickness of min 4 pcf mineral wool batt insulation for nom 4 in. diam (or smaller) pipes, conduits or tubings and a min 4 in. thickness of min 4 pcf mineral wool batt insulation for pipe greater than nom 4 in. diam, firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

4. Fill, Void or Cavity Material+ – Sealant – Min 1/2 in. thickness of fill material applied within the annulus, flush with the top surface of floor or both surfaces of wall. At the point of contact location between pipe and concrete, a min 1/2 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – CP601S, CP606 or FS-ONE Sealant.

(Note: L Ratings apply only when FS-ONE Sealant is used).

*Bearing the UL Classification Marking

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-1149
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 4 CFM/sq ft

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants – One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be 0 in (point contact) to max 1-1/4 in. The following types and sizes of metallic pipes, conduits or tubing may be used:

A) Steel Pipe – Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B) Conduit – Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

C) Copper Tubing – Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

D) Copper Pipe – Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Packing Material – Min 3 in. thickness of min 4 pcf mineral wool batt insulation for nom 4 in. diam (or smaller) pipes, conduits or tubings and a min 4 in. thickness of min 4 pcf mineral wool batt insulation for pipe greater than nom 4 in. diam, firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

4. Fill, Void or Cavity Material+ – Sealant – Min 1/2 in. thickness of fill material applied within the annulus, flush with the top surface of floor or both surfaces of wall. At the point of contact location between pipe and concrete, a min 1/2 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC – CP601S, CP606 or FS-ONE Sealant.

(Note: L Ratings apply only when FS-ONE Sealant is used).

*Bearing the UL Classification Marking

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIMETRY OF THE OPENING SHALL BE MIN 1/4 IN. TO A MAX 1-3/4 IN. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FIRESTOP SYSTEM – THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL – MIN 2 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION PROVED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL+ – SEALANT – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. SPECIFIED TECHNOLOGIES INC – SPECIAL, TOL 100, TOL 100 OR TOL 100 SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

Reproduced by HILTI, Inc. Courtesy of Intertek Laboratories Inc. December 20, 2004

CLASSIFIED C UL US

SYSTEM NO. C-AJ-7023
JANUARY 06, 1999
F RATING – 2 HR
T RATING – 0 HR

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 diam of opening is 12 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Duct – Nom 6 in. diam (or smaller) NO. 28 GAUGE (OR HEAVIER) STEEL DUCT OR NOM 4 IN. DIA (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) STEEL DUCT. ONE STEEL DUCT TO BE INSTALLED EITHER