Fire Protection Products

Firestop Submittal Package

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Table of Contents

Matrix of 3M Listed Systems Typical for Plumbing / Mechanical Penetrations

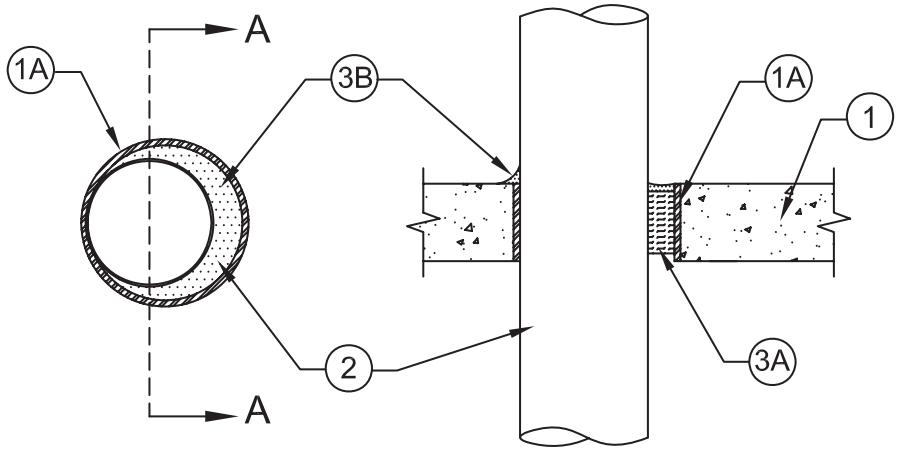
NOTE: This matrix provides an overview of the contents of the submittal - check systems details for specific parameters and alternate allowable products

Listed System #	Penetrant Type(s)	Fire Rated Assembly	F Rating	Product(s)	Notes
C-AJ-1427	Metallic Pipe	Concrete Floor/Wall	3	CP25WB+	10" steel or iron, 6" conduit, 4" copper
C-AJ-1364	Metallic Pipe	Concrete Floor	2	1003 SL	24" steel or iron, 6" conduit, 6" copper
W-L-1296	Metallic Pipe	Gypsum Wall	1,2,3,4	CP25WB+	24" steel or iron, 6" conduit, 6" copper
C-AJ-2378	PVC Pipe	Concrete Floor / Wall	2	CP25WB+	1.5" PVC
C-AJ-2643	PVC Pipe	Concrete Floor / Wall	2 & 3	Tuck In Wrap	2" - 4" PVC
C-AJ-2648	PVC Pipe	Concrete Floor / Wall	2	Tuck In Wrap	6" PVC
W-L-2300	PVC Pipe	Gypsum Wall	1 & 2	CP25WB+	1.5" PVC
W-L-2551	PVC Pipe	Gypsum Wall	1 & 2	Tuck In Wrap	4" and smaller PVC
C-AJ-5210	Insulated Pipe	Concrete Floor / Wall	1 & 2	CP25WB+	8" steel or iron, 4" copper (2" fg insulation)
W-L-5168	Insulated Pipe	Gypsum Wall	1 & 2	CP25WB+	8" steel or iron, 4" copper (2" fg insulation)

Engineering Judgements may be attached

System No. C-AJ-1427

March 05, 2007
F Rating – 3 Hr
T Rating – 0 Hr
W Rating – Class 1 (See Item 3)



SECTION A-A

1. **Floor or Wall Assembly** – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600 - 2400 kg/m^3) concrete floors or min 3 in. (76 mm) thick reinforced lightweight or normal weight concrete walls. Floor assembly may also be constructed of any min 6 in.(152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening 12-3/4 in. (324 mm). Max diam of opening in floors constructed of hollow-core concrete is 7 in. (78 mm).

   See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in Fire Resistance Directory for names of manufacturers.

1A. **Steel Sleeve** – (Optional) - Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly. Steel sleeve may be installed flush or may project max 2 in. (51 mm) beyond the floor or wall surfaces. As an alternate, nom 12 in. (305 mm) diam (or smaller) sleeve fabricated from nom 0.019 in. (0.48 mm) thick galv steel cast or grouted into floor or wall assembly flush with floor or wall surfaces.

2. **Through Penetrant** – One metallic pipe, conduit, tubing or flexible metal piping installed concentrically or eccentrically within opening. Annular space between penetrant and periphery of opening or sleeve shall be min of 0 in. (0 mm) (point contact) to max 2 in. (51 mm). Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of penetrants may be used:

   A. **Steel Pipe** – Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 10 in. (254 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   D. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
   F. **Through Penetrating Product*** – **Flexible Metal Piping** – The following types of steel flexible metal gas piping may be used:

      1.) Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

      OMEGA FLEX INC

      2.) Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

      GASTITE, DIV OF TITEFLEX

      3.) Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

      WARD MFG INC

3. **Firestop System** – The details of the firestop system shall be as follows:

   A. **Packing Material** – Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m^3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or top edge of sleeve or from both surfaces of wall or both ends of sleeve as required to accommodate the required thickness of fill material. In floors constructed of hollow-core concrete, packing material to be recessed from top and bottom surfaces of floor or sleeve as required to accommodate the required thickness of fill material.

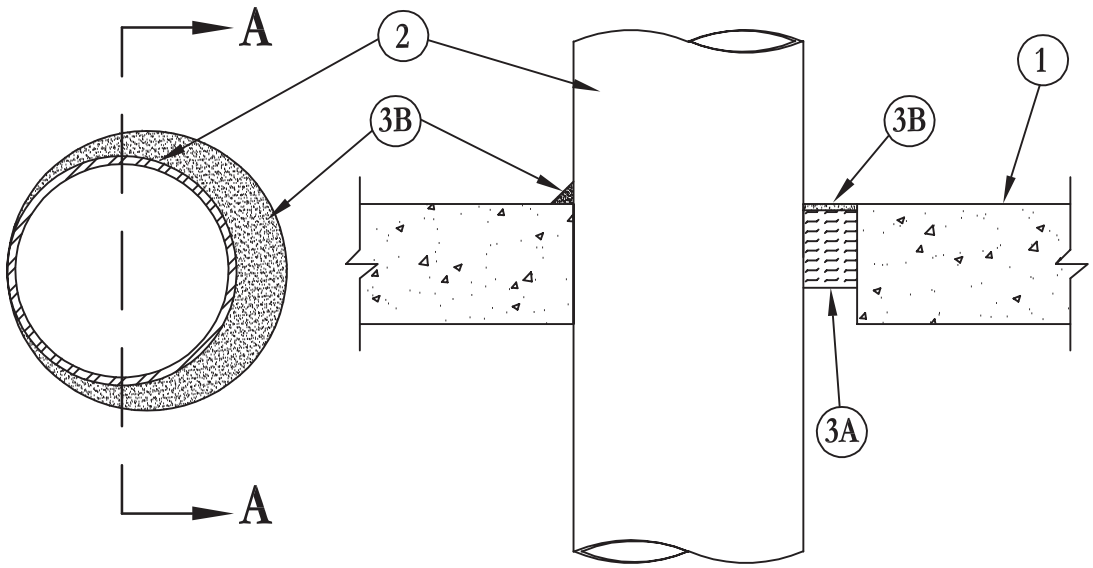
   B. **Fill, Void or Cavity Materials*** – **Caulk or Sealant** – Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top surface of floor or top edge of sleeve or with both surfaces of wall or both ends of sleeves. In floors constructed of hollow-core concrete, min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top and bottom surfaces of floor or sleeve. Min 1/4 in. (6 mm) diam bead of caulk applied to the penetrant/concrete or penetrant/sleeve interface at the point contact location on the top surface of floor or both surfaces of wall or hollow-core.

      3M COMPANY – IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant
      (Note: W Rating applies only when FB-3000 WT is used.)

*Bearing the UL Classification Mark

System No. C-AJ-1364

August 23, 2004
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 2 CFM/sq ft
W Rating – Class I



SECTION A-A

1. **Floor 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 25-7/8 in.

   See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants** – One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between tube and periphery of opening shall be min 0 in. to max 1-7/8 in. Penetrants to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes, tubing or conduit may be used:

   A. **Steel Pipe** – Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

   B. **Iron Pipe** – Nom 24 in. diam (or smaller) cast or ductile iron pipe.

   C. **Conduit** – Nom 6 in. diam (or smaller) rigid steel conduit.

   D. **Conduit** – Nom 4 in. (or smaller) steel electrical metallic tubing.

   E. **Copper Tubing** – Nom 6 in. diam (or smaller) Type L (or heavier) copper tube.

   F. **Copper Pipe** – Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. **Firestop System** – The details of the firestop system shall be as follows:

   A. **Packing Material** – Min 3 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material.

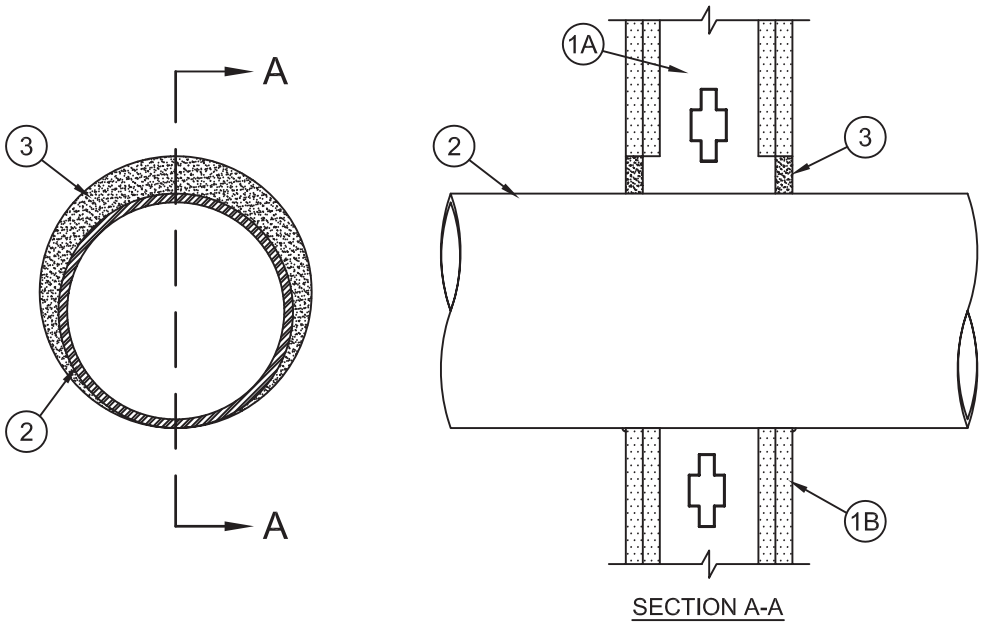
   B. **Fill, Void or Cavity Materials*** – **Sealant** – Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor. Min 1/2 in. diam bead of caulk applied to the penetrant/concrete interface at the point contact location on the top surface of floor.

   3M COMPANY – FB-1000 NS, FB-1003 SL or FB-3000 WT sealant.

*Bearing the UL Classification Mark

System No. W-L-1296

February 14, 2008
F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 0 and 1/4 Hr (See Item 1)



1. **Wall Assembly** – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 10-5/8 in. (270 mm).
   C. **Steel Sleeve** – (Optional, Not Shown) - Cylindrical sleeve fabricated from min 0.019 in. thick (0.48 mm) galv sheet steel and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T Rating is 0 and 1/4 Hr for 1 and 2 Hr rated assemblies, respectively.
2. **Through Penetrants** – One metallic pipe, conduit, tubing or flexible metal pipe installed concentrically or eccentrically within opening. Annular space between penetrant and periphery of opening to be min 0 in. (0 mm point contact) to max 2 in. (51 mm). Penetrant to be rigidly supported on both sides of wall. The following types and sizes of penetrants may be used:
   A. **Steel Pipe** – Nom 8 in. (203 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Conduit** – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or nom 6 in. (152 mm) rigid steel conduit.
   D. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
   F. **Through Penetrating Product*** – **Flexible Metal Piping** – The following types of steel flexible metal gas piping may be used:
      1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

         OMEGA FLEX INC
      2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

         GASTITE, DIV OF TITEFLEX
      3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

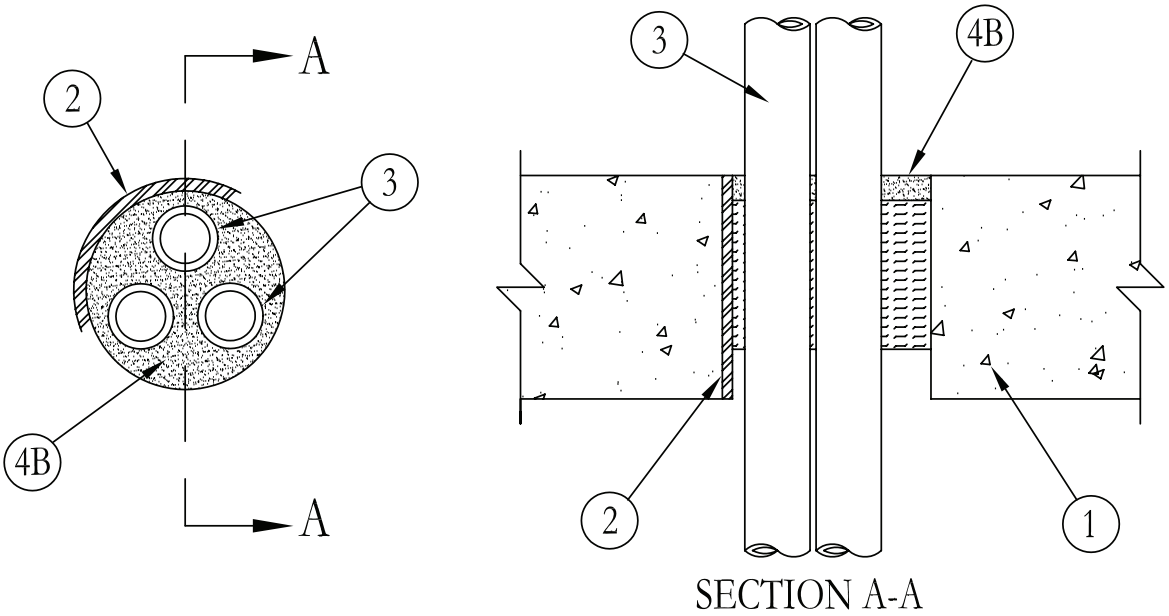
         WARD MFG INC
3. **Fill, Void or Cavity Material*** – **Caulk or Sealant** – Min 5/8 in. (16 mm) thickness of caulk applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall.

   3M COMPANY – IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Mark

System No. C-AJ-2378

May 19, 2005
F Rating – 2 Hr
T Rating – 0 Hr
W Rating – Class I (See Item 4)



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/m^3) concrete. Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening 5 in. (127 mm).

   See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in Fire Resistance Directory for names of manufacturers.

2. **Steel Sleeve** (Optional) – Nom 5 in. (127 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly. Steel sleeve may be installed flush or may project max 2 in. (51 mm) beyond the floor or wall surfaces.

3. **Through Penetrants** – One or more nonmetallic pipes, conduits or tubes installed concentrically or eccentrically within opening. Annular space between penetrants and periphery of opening or sleeve shall be min of 1/4 in. to max 2 in. (6 mm to max 51 mm).The space between penetrants shall be min of 1/4 in. to max 2 in. (6 mm to max 51 mm). Penetrants to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of penetrants may be used:

   A. **Polyvinyl Chloride (PVC) Pipe** – Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   B. **Rigid Nonmetallic Conduit+** – Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).

   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** – Nom 1-1/2 in. (38 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

   D. **Crosslinked Polyethylene (PEX) Tubing** – Nom 1 in. (25 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

4. **Firestop System** – The details of the firestop system shall be as follows:

   A. **Packing Material** – Min 3 in. (76 mm) thickness of min 4 pcf (64 kg/m^3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or top edge of sleeve or from both surfaces of wall or both ends of sleeve as required to accommodate the required thickness of fill material. In floors constructed of hollow-core concrete, packing material to be recessed from top and bottom surfaces of floor or sleeve as required to accommodate the required thickness of fill material.

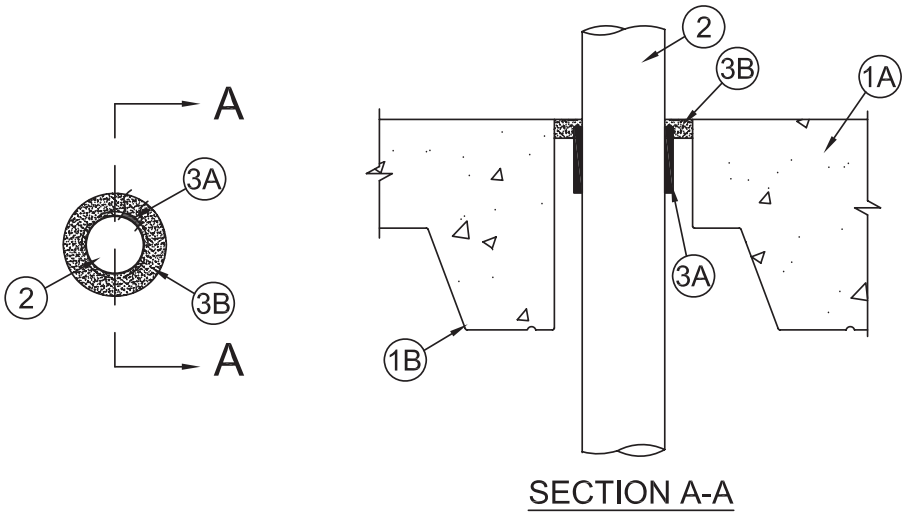
   B. **Fill, Void or Cavity Materials*** – **Caulk or Sealant** – Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top surface of floor or top edge of sleeve or with both surfaces of wall or both ends of sleeves. In floors constructed of hollow-core concrete, min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top and bottom surfaces of floor or sleeve. Min 1/4 in. (6 mm) diam bead of caulk applied to the penetrant/concrete or penetrant/sleeve interface at the point contact location on the top surface of floor or both surfaces of wall or hollow-core concrete.

      3M COMPANY – IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant.
      (Note: W Rating applies only when FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.)

*Bearing the UL Classification Marking

System No. C-AJ-2643

July 19, 2010
F Ratings – 2 and 3 Hr (See Item 2)
T Rating – 1 Hr



SECTION A-A

1. **Floor Assembly** – The fire rated concrete and steel deck floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series Floor-Ceiling designs in the UL Fire Resistance Directory and as summarized below:
   A. **Concrete** – Min 2 1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete topping, as measured from the top of the steel floor units.
   B. **Steel Floor and Form Units*** – Composite or noncomposite 1-1/2, 2 or 3 in. (38, 51 or 76 mm) deep fluted galv units as specified in the individual Floor-Ceiling design. Diam of opening through floor to be 1/2 to 1-1/2 in. (13 to 38 mm) larger than the outside diam of through-penetrant (Item 2). Max diam of opening is 6 in. (152 mm).

1A. **Floor or Wall Assembly** – As an alternate to Item 1, 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***. Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Diam of opening through floor or wall to be 1/2 to 1-1/2 in. (13 to 38 mm) larger than the outside diam of through-penetrant (Item 2).Max diam of opening is 6 in. (152 mm).

See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrant** – One nonmetallic pipe or conduit to be installed concentrically within the firestop system. The annular space between the pipe or conduit and the periphery of the opening shall be min 1/4 in. (6 mm) to max 3/4 in. (19 mm). Pipe or conduit to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
   A. **Polyvinyl Chloride (PVC) Pipe** – Nom 4 in. (102 mm) diam (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. **Fire Retardant Polypropylene (FRPP) Pipe** – Nom 4 in. (102 mm) diam (or smaller) Schedule 40 FRPP 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) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

   Solid core PVC pipe (Item 2A) limited to a maximum 2 Hr F Rating.
3. **Firestop System** – The firestop system shall consist of the following:
   A. **Fill, Void or Cavity Materials*** – **Wrap Strip** – Nom 3/16 in. (5 mm) thick intumescent material supplied in 2-1/2 in. (64 mm) wide strips. Single layer of pre-cut wrap strip tightly wrapped around nonmetallic pipe, secured with the adhesive closure tab, and slid into annular space. When installed in floors, wrap strip is to be recessed within the opening such that the bottom of the wrap strip layer protrudes 1/4 in. (6 mm) below the bottom surface of the floor. For steel deck/concrete floor assemblies, wrap strip is to be recessed within the opening such that the bottom of the wrap strip layer protrudes 1/4 in. (6 mm) below the crest of the fluted steel deck. For wall assemblies, wrap strip is to be installed on both sides of wall and is to protrude 1/4 in. (6 mm) from each surface of wall.

      3M COMPANY
      3M FIRE PROTECTION PRODUCTS – Tuck-In Wrap Strip WS 200, WS 300 or WS 400
   B. **Fill, Void or Cavity Materials*** – **Sealant** – Min 1/2 in. (13 mm) thickness of sealant applied within annular space between wrap strip and edge of opening with a min 1/4 in. (6mm) depth of sealant above top edge of wrap strip in floor assemblies. When hollow-core precast concrete units are used, min 1/2 (13 mm) thickness of sealant applied within annular space, flush with top surface of floor. Wall assemblies are to have a min 1/2 in. (13 mm) depth of sealant applied to fill annular space on each side of wall.

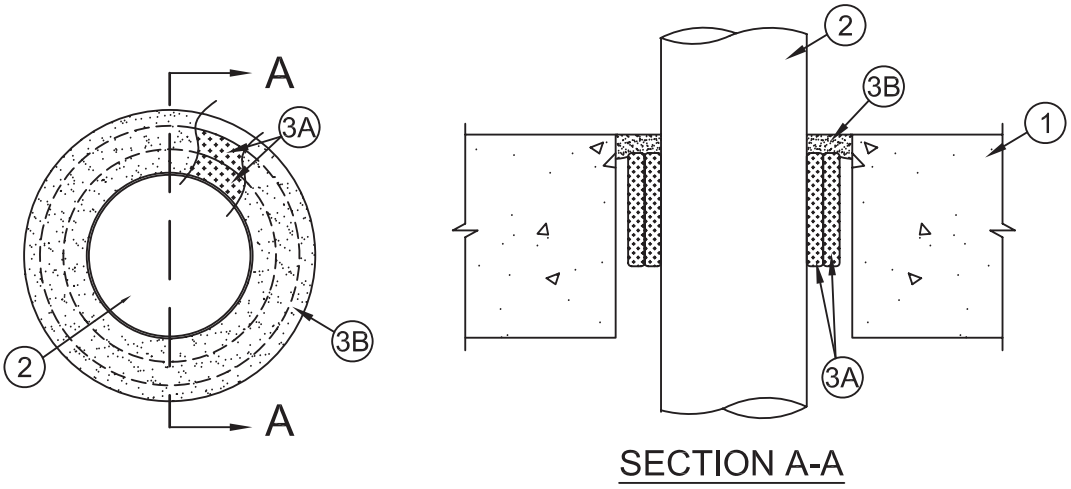
      3M COMPANY
      3M FIRE PROTECTION PRODUCTS – IC-15WB+, CP 25WB+, or 3000 WT Sealant

*Bearing the UL Classification Mark
++Bearing the UL Listing Mark

Note: Systems with Nonmetallic Through Penetrant(s) have not been evaluated with a pressure differential of 50 Pa between the exposed and unexposed surfaces as required by the National Building Code of Canada.

System No. C-AJ-2648

February 08, 2011
F Rating – 2 Hr
T Rating – 0 Hr
W Rating – Class I (See Item 3)
L Rating at Ambient – Less than 1 CFM/sq ft
L Rating at 400 F – Less than 1 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) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Max diam of opening is 8 in. (203 mm). Max diam of opening in floors constructed with hollow-core concrete is 7 in. (178mm).

   See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrant** – One nonmetallic pipe or conduit to be installed concentrically within the firestop system. The annular space between the pipe or conduit and the periphery of the opening shall be 11/16 in. (17.5 mm). Pipe or conduit to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

   A. **Polyvinyl Chloride (PVC) Pipe** – Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   B. **Rigid Nonmetallic Conduit**+ – Nom 6 in.(152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

3. **Firestop System** – The firestop system shall consist of the following:

   A. **Fill, Void or Cavity Materials*** – **Wrap Strip** – Two layers of min 3/16 in. (5 mm) thick intumescent material supplied in 2-1/2 in. (64 mm) wide strips. Two layers of wrap strip tightly wrapped around nonmetallic pipe and secured with either aluminum foil tape or filament tape. When installed in floors, wrap strip is to be installed within the opening such that the top of the wrap strip is min 1/4 in. (6 mm) below the top surface of floor. For wall assemblies, wrap strip is to be installed on both sides of wall and installed in the wall such that the wrap strip is recessed a min. of 1/4 in. (6 mm) from both surfaces of wall.

   3M COMPANY
   3M FIRE PROTECTION PRODUCTS – Tuck-In Wrap Strip WS Roll

   B. **Fill, Void or Cavity Materials*** – **Sealant** – Min 1/4 in. (6 mm) thickness of sealant applied within annular space, flush with top surface of floor. When hollow-core precast concrete units are used min 1/2 (13 mm) thickness of sealant applied within annular space, flush with top and bottom surfaces of floor. Wall assemblies are to have a min 1/4 in. (6 mm) diam depth of sealant applied to concrete or concrete block/wrap strip interface on both sides of wall.

   3M COMPANY
   3M FIRE PROTECTION PRODUCTS – IC-15WB+, CP 25WB+, or 3000 WT Sealant

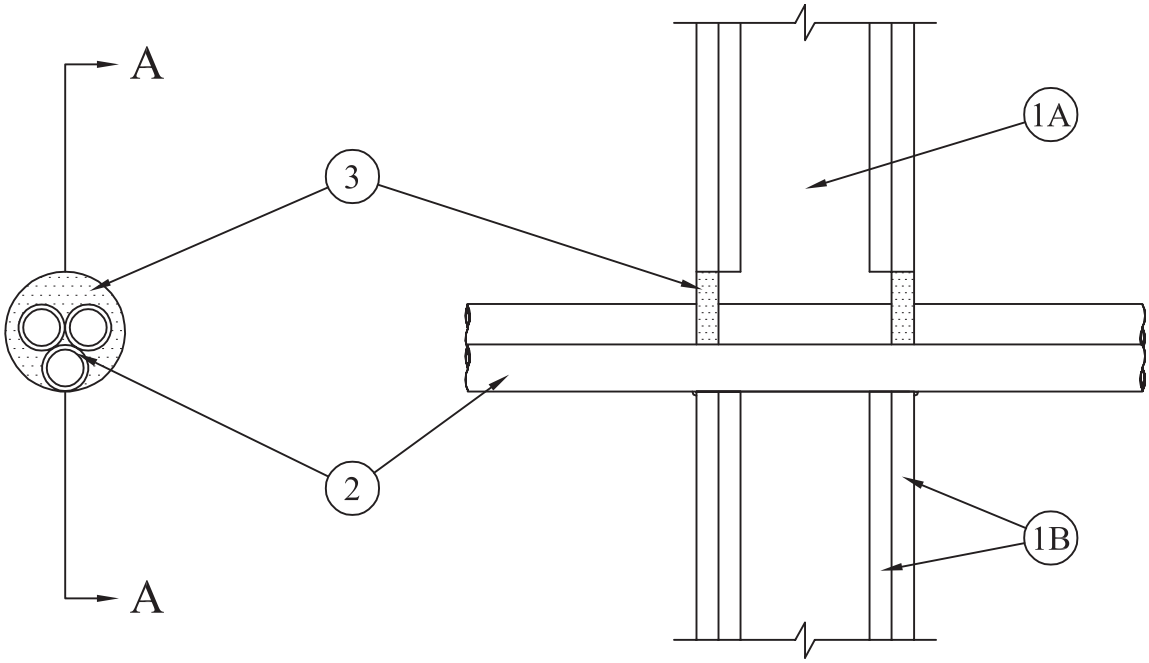
   (**Note:** W Rating only applies when FB 3000 WT Sealant is used in floor assembly)

*Bearing the UL Classification Mark
++Bearing the UL Listing Mark

Note: Systems with Nonmetallic Through Penetrant(s) have not been evaluated with a pressure differential of 50 Pa between the exposed and unexposed surfaces as required by the National Building Code of Canada.

System No. W-L-2300

May 19, 2005
F Ratings – 1 & 2 Hr (See Item 1)
T Ratings – 0 & 1/2 Hr (See Item 1)



Section A-A

1. **Wall Assembly** – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (51 mm by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 4 in. (102 mm).

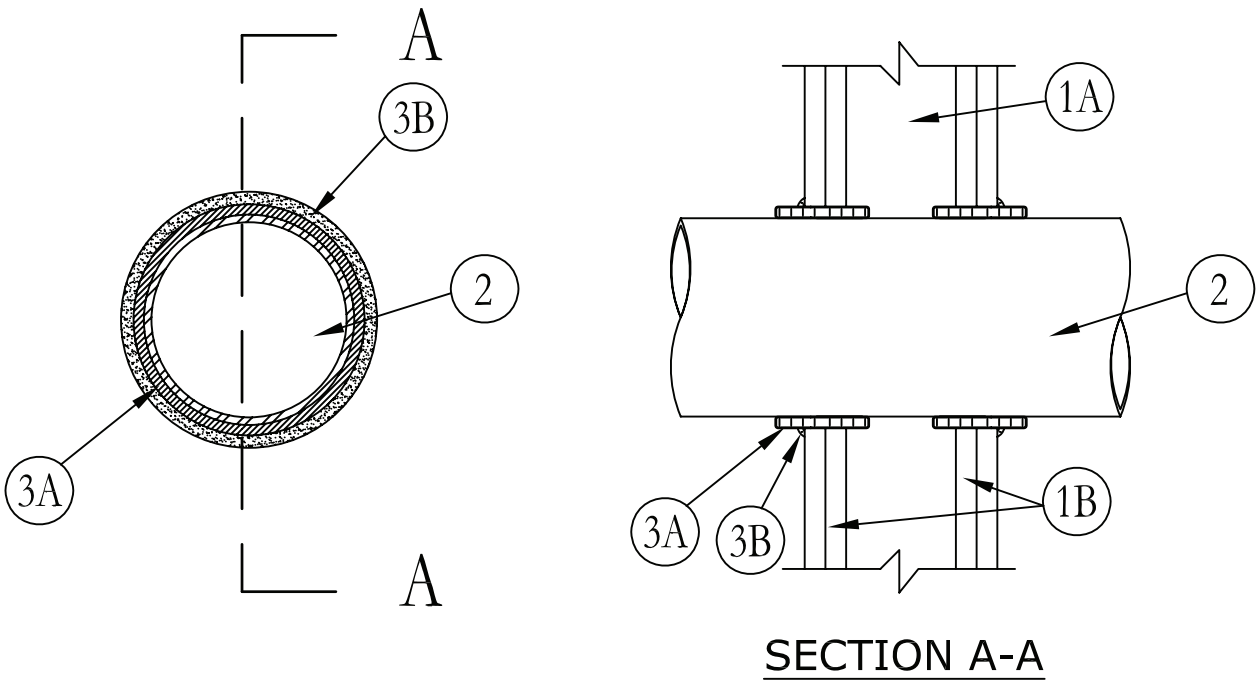
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T Rating is 0 and 1/2 Hr for 1 and 2 Hr rated assemblies, respectively.
2. **Through Penetrants** – One or more nonmetallic pipes, conduits or tubes installed concentrically or eccentrically within opening. Annular space between penetrants and periphery of opening to be min 0 in. (point contact) to max 1 in. (0 mm to max 25 mm). Space between penetrants shall be min 0 in. (point contact) to max 1 in. (0 mm to max 25 mm). Penetrants to be rigidly supported on both sides of wall. The following types and sizes of penetrants may be used:
   A. **Polyvinyl Chloride (PVC) Pipe** – Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. **Rigid Nonmetallic Conduit++** – Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).
   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** – Nom 1-1/2 in. (38 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
   D. **Crosslinked Polyethylene (PEX) Tubing** – Nom 1 in. (25 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
3. **Fill, Void or Cavity Material* – Caulk or Sealant** – Min 5/8 in. (16 mm) thickness of caulk applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall.

   3M COMPANY – IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant
   (Note: CP 25WB+ not suitable for use with CPVC pipes.)

*Bearing the UL Classification Marking

System No. W-L-2551

February 15, 2010
F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 1 and 2 Hr (See Item 1)



SECTION A-A

1. **Wall Assembly** – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Design in the UL Fire Resistance Directory. Max diam of opening is 5 in. (127 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T Rating is 1 and 2 hr for 1 and 2 hr rated assemblies, respectively.
2. **Through Penetrants** – One nonmetallic pipe or conduit concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 3/8 in. (10 mm) to max 5/8 in. (16 mm). Penetrant to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes or conduits:
   A. **Polyvinyl Chloride (PVC) Pipe** – Nom 4 in. (102 mm) diam (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. **Fire Retardant Polypropylene (FRPP) Pipe** – Nom 4 in. (102 mm) diam (or smaller) Schedule 40 FRPP 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) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).
3. **Firestop System** – The firestop system shall consist of the following:
   A. **Fill, Void or Cavity Materials*** – **Wrap Strip** – Min 3/16 in. (5 mm) thick intumescent material supplied in 2-1/2 in. (64 mm) wide strips. Single layer of pre-cut wrap strip tightly wrapped around nonmetallic pipe and secured with the adhesive closure tab. Wrap strip to be slid into opening such that the outer edge of wrap strip extends approx 5/8 in. (16 mm) from both surfaces of wall.

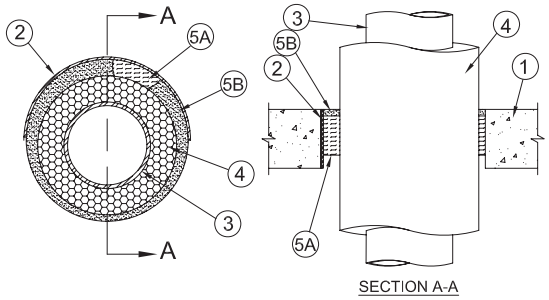
      3M COMPANY
      3M FIRE PROTECTION PRODUCTS – Tuck-In Wrap Strip WS 200, WS 300 or WS 400
   B. **Fill, Void or Cavity Material*** – **Caulk or Sealant** – Min 1/4 in. (6 mm) diam bead of sealant applied to gypsum board/wrap strip interface on both sides of wall.

      3M COMPANY
      3M FIRE PROTECTION PRODUCTS – IC 15WB+, CP 25WB+ or FB-3000 WT sealant

*Bearing the UL Classification Mark

System No. C-AJ-5210

March 15, 2007
F Ratings – 1-1/2 & 2 Hr (See Item 4)
T Ratings – 1/2, 3/4, 1 & 1-1/4 Hr (See Item 4)



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/m^3) concrete. Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening 14 in. (356 mm). Max diam of opening in floors constructed of hollow-core concrete is 7 in. (178 mm).

   See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in Fire Resistance Directory for names of manufacturers.

2. **Steel Sleeve** – (Optional) – Nom 14 in. (356 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly. Steel sleeve may be installed flush or may project max 2 in. (51 mm) beyond the floor or wall surfaces. As an alternate, nom 14 in. (356 mm) diam (or smaller) sleeve fabricated from nom 0.028 in. (0.71 mm) thick galv steel cast or grouted into floor or wall assembly flush with floor or wall surfaces.

3. **Through Penetrants** – One metallic pipe or tubing to be installed concentrically or eccentrically within opening. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubes may be used:

   A. **Steel Pipe** – Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type M (or heavier) copper tube.
   D. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. **Pipe Covering** – Nom 2 in. (51 mm) thick (or less) hollow cylindrical heavy density 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 tape supplied with product. Annular space between the pipe covering and periphery of opening or sleeve shall be min 1/2 in. to max 1 in. (13 mm to max 25 mm).

   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.

   The hourly F and T Ratings are dependent on the type of pipe or tube and the nom thickness of the pipe covering, as shown below:

Penetrant	Pipe Covering Nom Thickness, in. (mm)	F Rating, Hr	T Rating, Hr
A & B	2 (51)	2	1-1/4
C & D	2 (51)	1-1/2	1
A, B, C & D	1 (25)	2	3/4
A, B, C & D	1/2 (13)	2	1/2

5. **Firestop System** – The details of the firestop system shall be as follows:

   A. **Packing Material** – Min 3 in. (76 mm) thickness of min 4 pcf or (64 kg/m^3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or top edge of sleeve or from both surfaces of wall or both ends of sleeve as required to accommodate the required thickness of fill material. In floors constructed of hollow-core concrete, packing material to be recessed from top and bottom surfaces of floor or sleeve as required to accommodate the required thickness of fill material.

   A1. **Forming Material*** – As an alternate to the packing material in Item 5A, nom 4 in. (102 mm) wide strips of min 1/2 in (13 mm) thick compressible mat to be stacked to a thickness greater than the width of the annular space and compression-fitted, edge-first, to fill the annular space to a min 4 in. (102 mm) depth. Top of forming material to be recessed from top surface of floor or from both surfaces of wall as necessary to accommodate the required thickness of caulk fill material. In floors constructed of hollow-core concrete, forming material to be recessed from top and bottom surfaces of floor or sleeve as required to accommodate the required thickness of fill material.

   3M COMPANY – Fire Barrier Packing Material

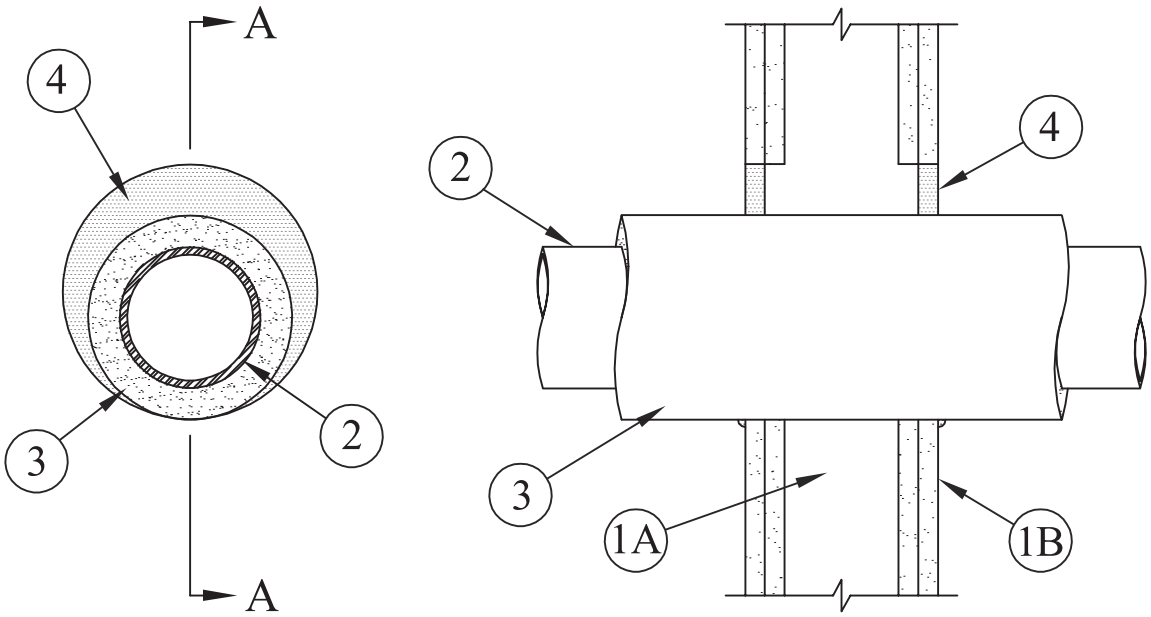
   B. **Fill, Void or Cavity Materials* – Caulk or Sealant** – Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top surface of floor or top edge of sleeve or with both surfaces of wall or both ends of sleeves. In floors constructed of hollow-core concrete, min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top and bottom surfaces of floor or sleeve.

   3M COMPANY – IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Mark

System No. W-L-5168

May 19, 2005
F Ratings – 1 & 2 Hr (See Item 1)
T Ratings – 0, 1/2, 3/4, 1-1/4 and 1-1/2 Hr (See Item 3)



SECTION A-A

1. **Wall Assembly** – The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 , U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. by 4 in. (51 mm by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.

   B. **Gypsum Board*** – The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 12-1/2 in. (318 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants** – One metallic pipe or tubing installed concentrically or eccentrically within opening. Penetrant to be rigidly supported on both sides of wall. The following types and sizes of penetrants may be used:

   A. **Steel Pipe** – Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

   B. **Iron Pipe** – Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.

   C. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

   D. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. **Pipe Covering*** – Nom 1 in., 1-1/2 in. or 2 in. (25 mm, 38 mm or 51 mm) thick hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied SSL tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. Annular space between pipe covering and periphery of opening to be min 0 in. (point contact) to max 1-7/8 in. (0 mm to max 48 mm).

   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.

   The hourly T Rating is 1-1/4 Hr for pipe coverings of nom 1 in. and 1-1/2 in. (25 mm and 38 mm) thick for 2 Hr rated assemblies. The hourly T Rating is 1-1/2 Hr for pipe coverings of nom 2 in. (51 mm) thick for 2 Hr rated assemblies. The hourly T Rating is 1/2 Hr for pipe coverings of nom 1 in. and 1-1/2 in. (25 mm and 38 mm) thick for 1 Hr rated assemblies. The hourly T Rating is 3/4 Hr for pipe coverings of nom 2 in. (51 mm) thick for 1 Hr rated assemblies.

4. **Fill, Void or Cavity Material*** – **Caulk or Sealant** – Min 5/8 in. (16 mm) thickness of caulk applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/pipe covering interface at point contact location on both sides of wall.

   3M COMPANY – CP 25WB+, IC 15WB+ caulk or FB-3000 WT sealant

*Bearing the UL Classification Marking

3M Fire Protection Products

Date: April 6, 2017

Subject: GENERAL CERTIFICATE OF CONFORMANCE
3M FIRE PROTECTION PRODUCTS

Product Category: Through Penetration Firestop Products

3M™ Aluminum Foil Tape 425
3M™ Expantrol™ Flexible Intumescent Strip E-FIS
3M™ Fire Barrier 2" Plug PLG2
3M™ Fire Barrier 4" Plug PLG4
3M™ Fire Barrier Block B258
3M™ Fire Barrier Cast-In Devices & Accessories
3M™ Fire Barrier Composite Sheet CS-195+
3M™ Fire Barrier Sealant CP 25WB+
3M™ Fire Barrier Moldable Putty+ Pads (MPP+)
3M™ Fire Barrier Moldable Putty+ Sticks (MP+)
3M™ Fire Barrier Mortar
3M™ Fire Barrier Packing Material PM4
3M™ Fire Barrier Pass-Through Devices
3M™ Fire Barrier Pillows
3M™ Fire Barrier Plank PK39
3M™ Fire Barrier Plastic Pipe Device (PPD)
3M™ Fire Barrier Putty Sleeve Kits
3M™ Fire Barrier Rated Foam FIP 1-Step
3M™ Fire and Water Barrier Tape FWBT
3M™ Smoke and Sound Tape SST
3M™ Fire Barrier Sealant FD 150+
3M™ Fire Barrier Sealant IC 15WB+
3M™ Fire Barrier Self-Locking Pillows
3M™ Fire Barrier Silicone Sealant 2000+
3M™ Fire Barrier Tuck-In Wrap Strips
3M™ Fire Barrier Ultra Plastic Pipe Device (UPPD)
3M™ Fire Barrier Water Tight Sealant 1000 NS
3M™ Fire Barrier Water Tight Sealant 1003 SL
3M™ Fire Barrier Water Tight Sealant 3000 WT
3M™ Fire Barrier Watertight Spray
3M™ Fire Barrier Wrap Strips FS-195+
3M™ Fire Barrier Wrap Ultra GS
3M™ Fire Block Foam FB-Foam
3M™ Fire Block Sealant FB 136
3M™ FireDam™ Spray 200
3M™ Interam™ Stainless Steel Foil Tape T-65
3M™ Marine Fire Wrap
3M™ Smoke and Sound Sealant SS 100
3M™ Fire Barrier RC-1 Restricting Collar

The above listed products are tested to one or more of the following standards:

- ASTM E 119 (ANSI/UL 263) Standard Test Methods for Fire Tests of Building Construction and Materials
- ASTM E 814 (ANSI/UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems(under positive furnace pressure of minimum .01 inches of water column)
- ASTM E 84 (ANSI/UL 723) Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E 1966 (ANSI/UL 2079) Standard Test Method for Fire-Resistive Joint Systems
- NFPA 252 Standard Methods of Fire Test and Door Assemblies
- UBC Standard 7-2(97)
- IMO Res. A.754(18)
- ASTM E 2307 Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-story Test Apparatus
- ASTM E 136 Standard Test Method for Behavior of Material in a Vertical Tube Furnace at 750° C

- ASTM C 1338 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
- ISO 6944-1985 Fire resistance tests -- Ventilation ducts
- ASTM C 1241 Standard Test Method for Volume Shrinkage of Latex Sealants During Cure
- CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems
- ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

These products are formulated without asbestos, polychlorinated biphenyls (PCBs), or lead.

Issued by:

Quality Manager or Designee

Technical Manager, or Designee

Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for user's particular purpose and suitable for user's method of application.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Warranty and Limited Remedy: 3M warrants that each 3M Fire Protection Product will be free from defects in material and manufacture for 90 days from the date of purchase from 3M's authorized distributor. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price. **Limitation of Liability:** Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted."

3M

Industrial Adhesives and Tapes Division
St. Paul, MN 55144-1000
1-800-328-1687
www.3M.com/firestop

Fire Protection Products

Broadcast Number: T19-002
Date: 2/5/2019
Issued by: 3M IATD EHS&R Department and FPP Application Engineering

Title: LEED® v4 BD+C (New Construction and Major Renovation) Credit Contribution and Compliance for 3M™ Fire Protection Products

Indoor Environmental Quality (IEQ)

Low-Emitting Materials:

Product Name	VOC Content (g/l)	Total VOC Emissions CDPH Spec 01350 v1.1
3M™ Fire and Water Barrier Tape FWBT	N/A	Complies
3M™ Smoke and Sound Tape SST	N/A	Complies
3M™ FPP Watertight Spray	131.2	Complies
3M™ FireDam Spray 200	2.9	Complies
3M™ Fire Barrier Sealant FD 150+	114.6	Complies
3M™ Fire Barrier Sealant IC 15 WB+	3.96	Complies
3M™ Fire Barrier Sealant CP 25WB+	5.69	Complies
3M™ Fire Barrier Water Tight Sealant 1000NS	47.3	Complies
3M™ Fire Barrier Water Tight Sealant 1003SL	52.6	Complies
3M™ Fire Barrier Silicone Sealant 2000+	29.0	Complies
3M™ Fire Barrier Water Tight Sealant 3000 WT	64.7	Complies
3M™ Fire Barrier Composite Sheet CS-195+	N/A	Complies
3M™ Fire Barrier Duct Wrap 615+	N/A	Complies
3M™ Interam™ E-5A-4 Endothermic Mat	N/A	Complies
3M™ Fire Barrier Tuck-In Wrap Strip	N/A	Complies
3M™ Fire Barrier Moldable Putty Pads MPP+	0.1	Complies
3M™ Fire Barrier Moldable Putty Stix MP+	0.3	Complies
3M™ Fire Barrier Rated Foam FIP 1-Step	6.6	Complies
3M™ Fire Barrier Blocks, Plugs, and Planks	N/A	Complies

VOC content was measured per EPA Method 24 or SCAQMD Method 304 (less H_2O and exempt solvents per SCAQMD Rule 1168).

All tested samples comply with limits specified in CDPH Spec 01350 v1.1 for Targeted VOC and Formaldehyde limits in a private office and classroom. All samples were found to have a measured range of total VOCs, per LEED v4 for total VOC and Target Chemical listed in CDPH v 1.1 Table 4-1, of 0.5 mg/m^3 or less after 14 days.

All samples were tested at Intertek Testing Services NA Inc. or UL LLC, ISO/IEC Standard 17025 accredited laboratories. VOC Emission test certificates and reports available at 3M.com/firestop or upon request.

Materials and Resources

Building Product Disclosure and Optimization - Environmental Product Declaration (EPD)

3M IATD chooses not to pursue this declaration at this time.

Building Product Disclosure and Optimization - Sourcing of Raw Materials

Raw Material source and extraction information
3M Company publishes Corporate Sustainability Report (CSR) reports annually. This report is available at https://www.3m.com/3M/en_US/sustainability-report/.

Building Product Disclosure and Optimization - Material Ingredients Reporting

3M IATD chooses the Health Product Declaration repository to demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm).

HPDs have been created for the products indexed below.

Product Name
3M™ Fire and Water Barrier Tape FWBT
3M™ Smoke and Sound Tape SST
3M™ FPP Watertight Spray
3M™ FireDam Spray 200
3M™ Fire Barrier Sealant FD 150+
3M™ Fire Barrier Sealant IC 15 WB+
3M™ Fire Barrier Sealant CP 25WB+
3M™ Fire Barrier Water Tight Sealant 1000NS
3M™ Fire Barrier Water Tight Sealant 1003SL
3M™ Fire Barrier Silicone Sealant 2000+
3M™ Fire Barrier Water Tight Sealant 3000 WT
3M™ Fire Barrier Composite Sheet CS-195+
3M™ Fire Barrier Duct Wrap 615+
3M™ Interam™ E-5A-4 Endothermic Mat
3M™ Fire Barrier Tuck-In Wrap Strip
3M™ Fire Barrier Moldable Putty Pads MPP+
3M™ Fire Barrier Moldable Putty Stix MP+
3M™ Fire Barrier Rated Foam FIP 1-Step
3M™ Fire Barrier Blocks, Plugs, and Planks

Visit https://hpdrepository.hpd-collaborative.org to view the HPDs.
Search by Manufacturer Name = 3M Company.

Construction and Demolition Waste Management:

Packaging and pallet components contribute to recycled and/or salvage content.

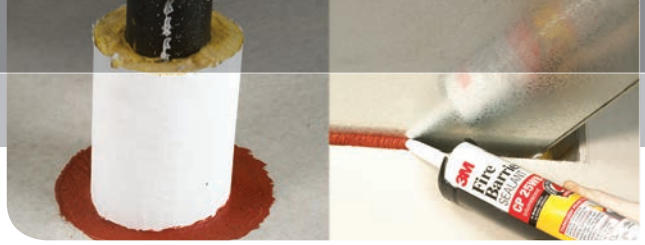
Recycled Content: The above listed products do not contain any pre- or post-consumer recycled material at this time.

Salvaged/Refurbished: The above listed products do not contain any salvaged/refurbished materials at this time.

Rapidly Renewable Materials: The above listed products do not contain any rapidly renewable materials at this time.

Note: For information on product composition greater than 1%, or chemicals of concern, please see www.3m.com/sds for Safety Data Sheets (SDS) and Regulatory Data Sheets (RDS).

Disclaimers: The information provided in this document related to material content represents 3M's knowledge and belief, which may be based in whole or in part on information provided by suppliers to 3M. This is intended to answer commonly asked questions about 3M products and is not intended to be a comprehensive listing of all substances that may be of interest or that may be regulated in this or other 3M products, nor is it intended to be a comprehensive summary of any and all regulations that may apply to this product. Where substances are listed, their listing does not infer or constitute a judgment as to their safety, environmental or health impacts. Information is supplied upon the condition that the persons receiving the same will make their own determination as to its suitability for their purposes prior to use. Customers are encouraged to consult with legal and regulatory experts to determine applicable regulations in light of intended use of the product.



3M™ Fire Barrier Sealant CP 25WB+

Product Data Sheet

FIRE BARRIER — UP TO 4 HOUR Fire Protection

SMOKE SEAL — L RATED Meets Optional L Requirements

SOUND BARRIER — STC 54 In STC 54-rated wall assembly

CLASSIFIED UL

FILL, VOID OR CAVITY MATERIAL
FOR USE IN THROUGH-PENETRATION
FIRESTOP SYSTEMS
SEE UL FIRE RESISTANCE DIRECTORY
90G9

ULC LISTED

FILL, VOID OR CAVITY
MATERIALS
90G9

FM APPROVED

SUBJECT TO THE CONDITIONS OF APPROVAL
AS A WALL & FLOOR PENETRATION
FIRESTOP WHEN INSTALLED AS DESCRIBED
IN THE CURRENT EDITION OF THE FMRC
APPROVAL GUIDE

LISTED
OMEGA POINT LABORATORIES US
Intertek
FIRESTOP SYSTEMS
SEE INTERTEK DIRECTORY

LISTED
C US
Intertek
FIRESTOP SYSTEMS
SEE INTERTEK DIRECTORY

1. Product Description

3M™ Fire Barrier Sealant CP 25WB+ is a high-performance, ready-to-use, gun-grade, latex-based, intumescent sealant that dries to form a monolithic firestop seal that also acts as a barrier to airborne sound transmission. 3M™ Fire Barrier Sealant CP 25WB+ helps control the spread of fire, smoke and noxious gasses before, during and after exposure to a fire when installed in accordance with a listed through penetration or fire-resistive joint assembly system.

3M™ Fire Barrier Sealant CP 25WB+ firestops blank openings and penetrations passing through fire-rated floor, floor/ceiling or wall assemblies and other fire-rated interior building construction. The unique intumescent property of this material allows 3M™ Fire Barrier Sealant CP 25WB+ to expand and help maintain a firestop penetration seal for up to 4 hours as penetrants are exposed to fire. 3M™ Fire Barrier Sealant CP 25WB+ exhibits excellent adhesion to a full range of construction substrates and penetrants. No mixing is required.

High-performance firestop sealant that also helps minimize sound transfer

Product Color: Red

Product Features

- Firestop tested up to 4 hours in accordance with ASTM E 814 (UL 1479) & CAN/ULC S115
- Fire Resistance tested for static construction joint systems in accordance with ASTM E 1966 (UL 2079)
- Re-enterable / repairable
- Meets UL 1479 aging requirements
- Helps minimize sound transfer*
- Applied with conventional caulking equipment (excellent caulk rate)
- Extensive listed systems
- Sag-resistant
- Halogen-free
- Excellent adhesion
- Paintable
- Water clean up

Meets the intent of LEED® VOC regulations—helps reduce the quantity of indoor air contaminants that may be odorous, irritating and harmful to the comfort and well-being of the installers and occupants. <250 g/L VOC contents (less H_2O and exempt solvents).

**Minimizes noise transfer—STC-Rating of 54 when tested in STC 54-rated wall assembly.*

2. Applications

High-performance 3M™ Fire Barrier Sealant CP 25WB+ is ideal for sealing single or multiple through penetrations in fire-rated construction. 3M™ Fire Barrier Sealant CP 25WB+ is typically used in mechanical, electrical and plumbing applications to firestop openings created by the following penetrations in fire-rated floors, floor/ceilings or walls: metallic pipe, plastic pipe (excluding CPVC), conduit, power and communication cable, cable trays, busways, combos, insulated pipe and HVAC duct penetrations. 3M™ Fire Barrier Sealant CP 25WB+ is also used to firestop blank openings and static construction joints.

3. Specifications

3M™ Fire Barrier Sealant CP 25WB+ shall be a one component, ready-to-use, gun-grade, latex-based, intumescent firestop sealant capable of expanding a minimum of 3 times its dried volume when exposed to temperatures above 1000°F (538°C). The material shall be thixotropic and shall be applicable to overhead, vertical and horizontal firestops. The sealant shall be listed by independent test agencies such as UL, Intertek or FM. 3M™ Fire Barrier Sealant CP 25WB+ shall be tested to and pass the criteria of ASTM E 814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems, ASTM E 1966 (UL 2079) Standard Test Method for Fire Resistive Joint Systems and CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems. 3M™ Fire Barrier Sealant CP 25WB+ meets the requirements of the IBC, IRC, IFC, IPC, IMC, NFPA 5000, NEC (NFPA 70) and NFPA 101.

Typically Specified Division
Division 7

Section 07 84 00 – Firestopping

Related Sections
Section 07 84 16 – Annular Space Protection
Section 07 84 43 – Fire-Resistant Joint Sealants
Section 07 86 00 – Smoke Seals
Section 07 87 00 – Smoke Containment Barriers
Section 07 27 00 – Air Barriers
Section 21 00 00 – Fire Suppression
Section 22 00 00 – Plumbing
Section 26 00 00 – Electrical

4. Physical Properties

Color:	Red
Application Temperature Range: (ASTM C 1299)	40° to 122°F (4° to 50°C)
Service Temperature Range:	-20° to 180°F (-28° to 82°C)
STC (ASTM E 90 and ASTM E 413)**:**	54 when tested in STC 54-rated wall assembly
Surface Burning (ASTM E 84)**:**	Flame Spread 0 Smoke Development 0

Hardness (ASTM D 2240 Shore A)**:**	45
Tensile Strength:	85 psi (0.59 MPa)
Volume Shrinkage (ASTM C 1241)**:**	28%
VOC Less H_2O and Exempt Solvents:	<1 g/L

Dry: Under typical conditions of 75°F (23°C) and 50% R.H., sealant becomes tack-free in about ten minutes and dry-to-touch in 30 to 60 minutes. Full dry depends upon ambient conditions and volume of sealant. Typical dry rate is approximately 1/8 inch (3 mm) per day.

Unit Volume: 10.1 fl. oz tube (298.7 mL, 18.2 $in.^3$), 20 fl. oz. sausage (591.5 mL, 36.1 $in.^3$), 27 fl. oz tube (798.5 mL, 48.7 $in.^3$), 2 gal. pail (7.57 L, 462 $in.^3$), 5 gal. pail (18.9 L, 1155 $in.^3$)

5. Packaging, Storage, Shelf Life

Packaging Product packaged in cartridge or pail is enclosed in HDPE plastic containers, sausage is packaged in aluminum foil wrap

Storage 3M™ Fire Barrier Sealant CP 25WB+ should be stored indoors in dry conditions between 40°F and 90°F (4°C and 32°C) in the original unopened package. Avoid repeated freeze / thaw exposures of the 3M™ Fire Barrier Sealant CP 25WB+ prior to installation.

Shelf Life 3M™ Fire Barrier Sealant CP 25WB+ shelf life is 12 months in original unopened containers from date of packaging when stored above 68°F (2°C).

Lot numbering (e.g. 8183AS): First digit = Last digit of year manufactured, Second to fourth digit = Julian Date, Letters = Random to distinguish between lot numbers

6. Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor / Dealer or Sales Representative for Applicable UL, Intertek or other third-party drawings and system details.

Preparatory Work The surface of the opening and any penetrating items should be cleaned to allow for the proper adhesion of the 3M™ Fire Barrier Sealant CP 25WB+. Ensure that the surface of the substrates are not wet and are frost free. Sealant can be installed with a standard caulking gun, pneumatic pumping equipment or it can be easily applied with a putty knife or trowel.

Installation Details Install the applicable depth of backing material, if required, as detailed within the applicable UL, Intertek, FM or other third-party listed system. Cut the end of the 3M™ Fire Barrier Sealant CP 25WB+ tube spout to achieve the desired bead width when applying. Install the applicable depth of 3M™ Fire Barrier Sealant CP 25WB+ into the opening flush with the surface of the substrate, or as detailed within the applicable listed system, at the depth for the assembly and rating that is required. Tool within 5 minutes. Clean all tools immediately after use with water.

Limitations Do not apply 3M™ Fire Barrier Sealant CP 25WB+ when surrounding temperature is less than 40°F (4°C) and in conditions where seals may be exposed to rain or water spray within 18 hours of application. Do not apply 3M™ Fire Barrier Sealant CP 25WB+ to building materials that bleed oil, plasticizers or solvent (e.g. impregnated wood, oil-based sealants, or green or partially vulcanized rubber). Do not apply 3M™ Fire Barrier Sealant CP 25WB+ to wet or frost-coated surfaces or to areas that are continuously damp or immersed in water.

NOTICE: This product is not acceptable for use with chlorinated polyvinylchloride (CPVC) pipes.

7. Maintenance

No maintenance should be required when installed in accordance with the applicable UL, Intertek, FM or other third-party listed system. Once installed, if any section of the 3M™ Fire Barrier Sealant CP 25WB+ is damaged, the following procedure will apply: remove and reinstall the damaged section in accordance with the applicable listed system, with a minimum 1/2 in. (12.7 mm) overlap onto the adjacent material.

8. Availability

3M™ Fire Barrier Sealant CP 25WB+ is available from 3M Authorized Fire Protection Products Distributors and Dealers. 3M™ Fire Barrier Sealant CP 25WB+ is available in 10.1 fl. oz. cartridges (12/case), 20.0 fl. oz. sausages (10/case), 27.0 fl. oz. cartridges (6/case), 2 gallon pails (1/case) and 5 gallon pails (1/case). For additional technical and purchasing information regarding this and other 3M Fire Protection Products, please call: 1-800-328-1687 or visit www.3m.com/firestop.

9. Safe Handling Information

Consult product's Material Safety Data Sheet (MSDS) prior to handling and disposal.

3M

Building and Commercial Services Division
3M Center, Building 223-2N-21
St. Paul, MN 55144-1000 USA
1-800-328-1687
www.3M.com/firestop

Please Recycle. Printed in USA.
Literature Order Info: 98-0400-5012-6

Safety Data Sheet

Document Group:	09-5451-1	**Version Number:**	26.00
Issue Date:	06/20/14	**Supercedes Date:**	08/18/13

SECTION 1: Identification

1.1. Product identifier
3M Brand Fire Barrier CP-25WB+

Product Identification Numbers
42-0016-4710-8, 42-0016-4715-7, 42-0016-4716-5, 98-0400-5380-7, 98-0400-5381-5, 98-0400-5382-3, 98-0400-5383-1, 98-0400-5406-0, 98-0400-5456-5, 98-0400-5562-0, 98-0400-5573-7, 98-0400-5610-7, 98-0400-5629-7

1.2. Recommended use and restrictions on use

Recommended use
Fire Protection, Used as Firestop in buildings.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2B.

2.2. Label elements
Signal word
Warning

Symbols
Not applicable

Pictograms
Not applicable

Hazard Statements

Causes eye irritation.

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Wash thoroughly after handling.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

2.3. Hazards not otherwise classified
None.

25% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Zinc Borate 2335	138265-88-0	10 - 30 Trade Secret *
Polymer (NJTS Reg. No. 04499600-7270)	Trade Secret*	10 - 30 Trade Secret *
Water	7732-18-5	10 - 30 Trade Secret *
Sodium Silicate	1344-09-8	10 - 30 Trade Secret *
Ethylhexyldiphenyl phosphate	1241-94-7	3 - 7 Trade Secret *
Oxide glass chemicals	65997-17-3	1 - 5 Trade Secret *
Iron oxide	1309-37-1	1 - 5 Trade Secret *
Polyethylene Glycol	25322-68-3	1 - 5 Trade Secret *
Triphenyl phosphate	115-86-6	< 1.0 Trade Secret *
Di-2-ethylhexlphenyl phosphate	16368-97-1	< 1.0 Trade Secret *
Polyoxyethylene monooctylphenyl ether	9036-19-5	< 1.0 Trade Secret *
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	55965-84-9	< 0.001 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Non-combustible. Use a fire fighting agent suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid eye contact. Keep out of reach of children. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities
Keep cool. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Triphenyl phosphate	115-86-6	ACGIH	TWA:3 mg/m3	
Triphenyl phosphate	115-86-6	OSHA	TWA:3 mg/m3	

Iron oxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	
Iron oxide	1309-37-1	OSHA	TWA(as fume):10 mg/m3	
ROUGE	1309-37-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Polyethylene Glycol	25322-68-3	AIHA	TWA(as particulate):10 mg/m3	
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Butyl Rubber
Neoprene
Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Red with negligible odor

Odor threshold	*No Data Available*
Melting point	*No Data Available*
Flash Point	No flash point
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Specific Gravity	1.35 [*Ref Std:* WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Volatile Organic Compounds	< 1 g/l
VOC Less H2O & Exempt Solvents	< 1 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Oxides of Phosphorus	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient

classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Polymer (NJTS Reg. No. 04499600-7270)	Ingestion	Rat	LD50 > 2,000 mg/kg
Zinc Borate 2335	Dermal	Rabbit	LD50 > 10,000 mg/kg
Zinc Borate 2335	Ingestion	Rat	LD50 > 10,000 mg/kg
Sodium Silicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium Silicate	Ingestion	Rat	LD50 500 mg/kg
Ethylhexyldiphenyl phosphate	Dermal	Rabbit	LD50 > 7,940 mg/kg
Ethylhexyldiphenyl phosphate	Ingestion	Rat	LD50 > 24,000 mg/kg
Iron oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron oxide	Ingestion	Not available	LD50 3,700 mg/kg
Polyethylene Glycol	Dermal	Rabbit	LD50 > 20,000 mg/kg
Polyethylene Glycol	Ingestion	Rat	LD50 32,770 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Polyoxyethylene monooctylphenyl ether	Dermal	Rabbit	LD50 > 3,000 mg/kg
Polyoxyethylene monooctylphenyl ether	Ingestion	Rat	LD50 > 500 mg/kg
Triphenyl phosphate	Dermal	Rabbit	LD50 > 7,900 mg/kg
Triphenyl phosphate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Triphenyl phosphate	Ingestion	Rat	LD50 > 3,000 mg/kg
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Dermal	Rabbit	LD50 87 mg/kg
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.33 mg/l

3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Rat	LD50 40 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polymer (NJTS Reg. No. 04499600-7270)	Rabbit	Minimal irritation
Sodium Silicate	Rabbit	Corrosive
Iron oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Minimal irritation
Oxide glass chemicals		No significant irritation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Polymer (NJTS Reg. No. 04499600-7270)		Mild irritant
Sodium Silicate	Rabbit	Corrosive
Iron oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Mild irritant
Oxide glass chemicals		No significant irritation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Sodium Silicate	Mouse	Not sensitizing
Iron oxide	Human	Some positive data exist, but the data are not sufficient for classification
Polyethylene Glycol	Guinea pig	Not sensitizing
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Human and animal	Sensitizing

Photosensitization

Name	Species	Value
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Sodium Silicate	In Vitro	Not mutagenic
Sodium Silicate	In vivo	Not mutagenic
Iron oxide	In Vitro	Not mutagenic
Polyethylene Glycol	In Vitro	Not mutagenic
Polyethylene Glycol	In vivo	Not mutagenic
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	In vivo	Not mutagenic
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Iron oxide	Inhalation	Human	Some positive data exist, but the data are not

			sufficient for classification
Polyethylene Glycol	Ingestion	Rat	Not carcinogenic
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Dermal	Mouse	Not carcinogenic
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 200 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not toxic to male reproduction	Rat	NOAEL 5699 +/- 1341 mg/kg/day	5 days
Polyethylene Glycol	Not Specified	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL N/A	
Polyethylene Glycol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 562 mg/animal/day	during gestation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to female reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to development	Rat	NOAEL 15 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Polyethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.008 mg/l	2 weeks
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Silicate	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	blood	All data are negative	Rat	NOAEL 804	3 months

					mg/kg/day	
Sodium Silicate	Ingestion	heart | liver	All data are negative	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Iron oxide	Inhalation	pulmonary fibrosis | pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.008 mg/l	2 weeks
Polyethylene Glycol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Polyethylene Glycol	Ingestion	heart | endocrine system | hematopoietic system | liver | nervous system	All data are negative	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Oxide glass chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Test Organism	Test Type	Result
Water flea, Daphnia magna	48 hours Aquatic Toxicity - Acute	27 mg/l
Green algae, Pseudokirchneriella subcapitata	72 hours Aquatic Toxicity - Chronic	2.6 mg/l

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit **http://3M.com/Transportinfo** or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Zinc Borate 2335 (ZINC COMPOUNDS)	138265-88-0	10 - 30

15.2. State Regulations

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

15.4. International Regulations

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

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Issue Date:	06/20/14	**Supercedes Date:**	08/18/13

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3M USA SDSs are available at www.3M.com

3M™ Fire Barrier Water Tight Sealants 1000 NS and 1003 SL

Product Data Sheet

FIRE BARRIER: UP TO 3 HOUR Fire Protection

SMOKE SEAL: L RATED Meets Optional L Requirements

SOUND BARRIER: STC 56 In STC 56-rated Wall Assembly

ELASTOMERIC: ±25% Movement Capability

WATER BARRIER: MEETS CLASS 1W Rating UL Water Leakage

CLASSIFIED UL

FILL, VOID OR CAVITY FOR USE IN JOINT SYSTEMS, THROUGH-PENETRATION FIRESTOP SYSTEMS AND PERIMETER CONTAINMENT SYSTEMS SEE UL FIRE RESISTANCE DIRECTORY 90G9

LISTED C W US Intertek FIRESTOP SYSTEMS SEE INTERTEK DIRECTORY

ULC LISTED FILL, VOID OR CAVITY MATERIALS 90G9

1. Product Description

3M™ Fire Barrier Water Tight Sealants 1000 NS and 1003 SL are ready-to-use, single component, neutral cure, silicone sealants that cure upon exposure to atmospheric humidity to form a flexible firestop seal. 3M™ Fire Barrier Water Tight Sealants helps control the spread of fire, smoke and noxious gasses before, during and after exposure to a fire when installed in accordance with a listed through penetration or fire-resistive joint assembly.

3M™ Fire Barrier Water Tight Sealant 1000 NS is a non-slump firestop used primarily on vertical surfaces while 3M™ Fire Barrier Water Tight Sealant 1003 SL is a self-leveling firestop ideal for floor applications. These firestop sealants also meets UL Water Leakage Test, W Rating – Class 1 requirements for systems tested and listed in accordance with ANSI/UL 1479. Both products are elastomeric, are ready-to use and exhibit excellent weatherability.

1000 NS and 1003 SL color: Light Gray

FGG =BM= SYSTEM COMPATIBLE

Firestop sealants that provide all-in one water infiltration and fire containment solutions

Product Features

- Firestop tested up to 3 hours in accordance with ASTM E 814 (UL 1479) & CAN/ULC S115
- Joint System Fire Resistance tested in accordance with ASTM E 1966 (UL2079)
- Meets UL Water Leakage Test, W Rating – Class 1 requirements
- Compression / extension capability of ± 25%
- Excellent adhesion
- Re-enterable/repairable
- Excellent weatherability upon cure
- Paintable with primer
- Halogen-free, low VOC
- Excellent caulk rate—applied with conventional caulking equipment

Meets the intent of LEED® VOC regulations—helps reduce the quantity of indoor air contaminants that may be odorous, irritating and harmful to the comfort and well-being of the installers and occupants.

Minimizes noise transfer—STC-Rating of 56 when tested in STC 56-rated wall assembly.

2. Applications

3M™ Fire Barrier Water Tight Sealant 1000 NS and 3M™ Fire Barrier Water Tight Sealant 1003 SL are used to firestop blank openings, dynamic and static construction joints and the following penetrating items that pass through fire-rated floor or wall assemblies: metallic pipes, non-metallic pipes, cables, cable tray, insulated pipes, combos and other miscellaneous mechanical penetrations. For vertical firestop applications, choose 3M™ Fire Barrier Water Tight Sealant 1000 NS and for horizontal applications, choose 3M™ Fire Barrier Water Tight Sealant 1003 SL.

3. Specifications

3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL are ready-to-use, single component, neutral cure, non-slumping (1000 NS) or self-leveling (1003 SL), silicone sealants. The sealants shall be listed by independent test agencies such as UL, Intertek or FM. 3M™ Fire Barrier Water Tight Sealants 1000 NS and 1003 SL shall be tested to and pass the criteria of ASTM E 814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems, ASTM E 1966 (UL 2079) Standard Test Method for Fire Resistive Joint Systems, CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems. These sealants shall meet UL W-Rating Class 1 requirements for watertightness. 3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL shall meet the requirements of NEC (NFPA 70), IBC, IFC, IRC, NFPA 101 and NFPA 5000.

Typically Specified MasterFormat (2004)
Section 07 84 00 – Firestopping

Related Sections
Section 07 27 00 – Air Barriers
Section 07 84 16 – Annular Space Protection
Section 07 84 43 – Fire-Resistant Joint Sealants
Section 07 86 00 – Smoke Seals
Section 07 87 00 – Smoke Containment Barriers
Section 07 92 13 – Elastomeric Joint Sealants
Section 07 92 19 – Acoustical Joint Sealants
Section 21 00 00 – Fire Suppression
Section 22 00 00 – Plumbing
Section 23 00 00 – Heating, Ventilating, and Air Conditioning (HVAC)
Section 26 00 00 – Electrical

4. Performance & TypicalPhysical Properties

Color:	Light Gray
Elongation at Break (ASTM D 412)**:**	600%
Service Temperature Range:	-60°F to 300°F (-51°C to 149°C)
STC (ASTM E90 and ASTM E 413)**:**	56 when tested in STC 56 rated wall assembly

Surface Burning (ASTM E 84): Flame Spread 0, Smoke Development 0

Hardness (ASTM C 66 Shore A)**:**	20-25 (1000 NS) 10-15 (1003 SL)
Tensile Strength:	85 psi (0.59 MPa)
VOC Less H_2O and Exempt Solvents:	<250 g/L

Cure: Under typical cure rate conditions of 77°F (25°C) and 50% R.H., sealant becomes tack-free in about ten minutes, dry-to-touch in 30 to 60 minutes and obtains full-cure adhesion in 14-21 days. Full cure depends upon ambient conditions and volume of sealant. Typical cure rate is approximately 1/8 inch (3mm) per day.

Unit Volume: 10.1 fl. oz tube (298.7 cc, 18.2 $in.^3$), 20 fl. oz. sausage (591.5 cc, 36.1 $in.^3$), 4.5 gal. pail (.017 m^3, 1039.5 $in.^3$)

Meets the intent of LEED® VOC environmental quality requirements.

5. Packaging, Storage, Shelf Life

Packaging Product packaged in cartridge or pail is enclosed in HDPE plastic containers, sausage is packaged in aluminum foil wrap.

Storage 3M™ Fire Barrier Water Tight Sealants should be stored indoors in dry conditions between 40°F and 90°F (4°C and 32°C). Avoid repeated freeze / thaw exposures of the 3M™ Fire Barrier Water Tight Sealants while still in the packaging.

Shelf Life 3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL shelf life is 12 months in original unopened containers from date of packaging when stored between 40°F and 90°F (4°C and 32°C). Normal stock rotation is recommended.

Lot numbering: First to sixth digit = Date of Production (MMDDYY), Seventh indicator = dash symbol (-), Eighth digit = shift number

6. Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor / Dealer or Sales Representative for Applicable UL, Intertek or other third-party drawings and system details.

Preparatory Work The surface of the opening and any penetrating items should be clean and free of dirt and debris to allow for the proper adhesion of 3M™ Fire Barrier Water Tight Sealant. Do not use alcohol to clean surfaces in penetration or joint opening, instead use a commercial solvent such as mineral spirits, xylene, toluene or methyl ethyl ketone (MEK). Ensure that the surface of the substrates are not wet and are frost free. Sealant can be installed with a standard caulking gun, pneumatic pumping equipment or it can be easily applied with a putty knife or trowel.

Installation Details Install the applicable depth of backing material, if required, as detailed within the applicable UL, Intertek or other third-party listed system. Cut the end of the 3M™ Fire Barrier Water Tight Sealant tube spout to achieve the desired bead width. Install the applicable depth of 3M™ Fire Barrier Water Tight Sealant into the opening flush with the surface of the substrate, or as detailed within the applicable listed system, at the required depth for the assembly and rating that is specified. Tool within 5 minutes. Clean all tools immediately after use with a commercial solvent such as mineral spirits, xylene, toluene or methyl ethyl ketone MEK.

Limitations Do not apply 3M™ Fire Barrier Water Tight Sealants 1000 NS or 1003 SL (note: once applied, sealant may be exposed to intermittent water − exhibits excellent weatherability when fully cured) or frost-coated, in unvented spaces where sealant is not exposed to atmospheric moisture, in areas where abrasion or physical abuse of the sealant are likely and/or where painting of sealant is required. Do not apply 3M™ Fire Barrier Water Tight Sealants 1000 NS or 1003 SL to polycarbonates or to building materials that bleed oil, plasticizers or solvent (e.g. impregnated wood, oil-based sealants, or green or partially vulcanized rubber).

Note: in confined cure conditions there may be discoloration of brass, copper or other sensitive metals.

7. Maintenance

No maintenance should be required when installed in accordance with the applicable UL, Intertek, FM or other third-party listed system. Once installed, if any section of the 3M™ Fire Barrier Water Tight Sealant is damaged, the following procedure will apply: remove and reinstall the damaged section in accordance with the applicable listed system, with a minimum 1/2 in. (12.7 mm) overlap onto the adjacent material.

8. Availability

3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL are available from 3M Authorized Fire Protection Products Distributors and Dealers in 10.1 fl. oz. cartridges (12/case), 20.0 oz. sausages (12/case) and 4.5 gallon pails (1/case); light gray-colored sealant. For additional technical and purchasing information regarding 3M Fire Protection Products, please call: 1-800-328-1687 or visit www.3m.com/firestop.

9. Safe Handling Information

Consult Material Safety Data Sheet (MSDS) prior to handling and disposing of 3M™ Fire Barrier Water Tight Sealant 1000 NS or 1003 SL.

3M

Building and Commercial Services Division
3M Center, Building 223-2N-21
St. Paul, MN 55144-1000 USA
1-800-328-1687
www.3M.com/firestop

Safety Data Sheet

Document Group:	08-8510-3	**Version Number:**	19.01
Issue Date:	08/16/16	**Supercedes Date:**	07/28/14

SECTION 1: Identification

1.1. Product identifier
3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL

Product Identification Numbers

ID Number	UPC	ID Number	UPC
98-0400-5276-7	00-51115-11535-6	98-0400-5278-3	00-51115-11537-5
98-0400-5279-1	00-51115-11538-7	98-0400-5281-7	00-51115-11540-5
98-0400-5554-7	00-51115-18789-6	98-0400-5555-4	00-51115-18790-2

1.2. Recommended use and restrictions on use

Recommended use
Fire Protection, This product is a watertight sealant that will help control the spread of fire, smoke and noxious gases.

1.3. Supplier's details
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure:
blood or blood-forming organs |
cardiovascular system |

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.

Storage:
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines. This product may release methyl ethyl ketoxime (CAS 96-29-7) during curing and/or when exposed to water or humid air.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Calcium Carbonate	1317-65-3	15 - 40 Trade Secret *
Poly(Dimethylsiloxane)	63148-62-9	15 - 40 Trade Secret *
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	15 - 40 Trade Secret *
Ketoxime Silane	22984-54-9	3 - 7 Trade Secret *
Amorphous Silica	7631-86-9	0.5 - 5 Trade Secret *
(Trimethoxysilylpropyl)Ethylenediamine	1760-24-3	0.5 - 1.0 Trade Secret *

Octamethylcyclotetrasiloxane	556-67-2	<= 0.1 Trade Secret *
Quartz silica	14808-60-7	<= 0.1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Formaldehyde	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Calcium Carbonate	1317-65-3	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Quartz silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz silica	14808-60-7	OSHA	TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:0.05 mg/m3	
Octamethylcyclotetrasiloxane	556-67-2	AIHA	TWA:10 ppm	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Low odor, light gray, thixotropic caulk
Odor threshold	*No Data Available*
Melting point	*No Data Available*
Flash Point	> 212 ºF [*Test Method:* Closed Cup]
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	< 5 mmHg [@ 25 ºC]
Specific Gravity	1.31 - 1.33 [*Ref Std:* WATER=1]
Solubility in Water	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Molecular weight	*No Data Available*
Volatile Organic Compounds	<=4 % weight [*Test Method:* tested per EPA method 24]
VOC Less H2O & Exempt Solvents	<=53 g/l [*Test Method:* tested per EPA method 24]

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Not determined

10.5. Incompatible materials
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
No health effects are expected. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal.

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

Additional Information:
Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Dermal	Rabbit	LD50 > 16,000 mg/kg
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Ingestion	Rat	LD50 > 64,000 mg/kg
Poly(Dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(Dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Ketoxime Silane	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Ketoxime Silane	Ingestion	Rat	LD50 2,260 mg/kg
(Trimethoxysilylpropyl)Ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
(Trimethoxysilylpropyl)Ethylenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
(Trimethoxysilylpropyl)Ethylenediamine	Ingestion	Rat	LD50 1,897 mg/kg
Quartz silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz silica	Ingestion		LD50 estimated to be > 5,000 mg/kg
Octamethylcyclotetrasiloxane	Dermal	Rat	LD50 > 2,400 mg/kg
Octamethylcyclotetrasiloxane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 36 mg/l
Octamethylcyclotetrasiloxane	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
(Trimethoxysilylpropyl)Ethylenediamine	Rabbit	Mild irritant
Octamethylcyclotetrasiloxane	Rabbit	Minimal irritation
Quartz silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
(Trimethoxysilylpropyl)Ethylenediamine	Rabbit	Corrosive
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Amorphous Silica	Human and animal	Not sensitizing
(Trimethoxysilylpropyl)Ethylenediamine	Multiple animal species	Sensitizing
Octamethylcyclotetrasiloxane	Human and animal	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	In Vitro	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic
Octamethylcyclotetrasiloxane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Amorphous Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Quartz silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Amorphous Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509	1 generation

				mg/kg/day	
Amorphous Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Ingestion	Toxic to female reproduction	Rabbit	NOAEL 50 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Toxic to female reproduction	Rat	NOAEL 3.6 mg/l	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
(Trimethoxysilylpropyl)Ethylenediamine	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Amorphous Silica	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Octamethylcyclotetrasiloxane	Dermal	hematopoietic system	All data are negative	Rabbit	NOAEL 960 mg/kg/day	3 weeks
Octamethylcyclotetrasiloxane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Inhalation	endocrine system | immune system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Inhalation	hematopoietic system	All data are negative	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg/day	2 weeks
Quartz silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	C.A.S. No	Regulation	Status
Octamethylcyclotetrasiloxane	556-67-2	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

15.2. State Regulations
Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Classification
Methyl Alcohol	67-56-1	Developmental Toxin

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 2 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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3M USA SDSs are available at www.3M.com

3M™ Fire Barrier Tuck-In Wrap Strips

Product Data Sheet

FIRE BARRIER
UP TO 3 HOUR Fire Protection
CLASSIFIED UL

FILL, VOID OR CAVITY MATERIAL
FOR USE IN THROUGH-PENETRATION
FIRESTOP SYSTEMS
SEE UL FIRE RESISTANCE DIRECTORY
90G9

ULC LISTED

FILL, VOID OR
CAVITY MATERIAL
90G9

1. Product Description

3M™ Fire Barrier Tuck-In Wrap Strips are designed to help prevent the passage of fire and smoke in new or existing non-metallic (e.g. plastic) pipe penetrations through wall or floor assemblies. 3M™ Fire Barrier Tuck-In Wrap Strips are engineered primarily for top-side firestop installations and help eliminate the need for retaining collars, concrete screws, ladders or most other material and equipment necessary for bottom-side installations. 3M™ Fire Barrier Tuck-In Wrap Strips come ready-to-install with an adhesive-backed closure label (excludes WS Roll). The wrap strips can be easily installed in both concrete floor and wall assemblies, as well as gypsum wallboard assemblies.

Ideal for top-side firestop installations in concrete floors.

Product Features

- Firestop tested for up to 3 hours in accordance with ASTM E 814 (UL 1479)
- Top-side concrete floor installations help eliminate the need for steel retaining collars and most other bottom-side installation equipment and materials
- Adhesive-backed label for quick installation
- Ready-to-install wrap strip—precut to length for 2 in. (51 mm), 3 in. (76 mm) and 4 in. (102 mm) non-metallic pipes
- Firestop up to 6 in. (152 mm) PVC pipe (requires 2-layers using 3M™Fire Barrier Tuck-In Wrap Strip WS Roll)

2. Applications

3M™ Fire Barrier Tuck-In Wrap Strips are ideal for use when firestopping through penetrations in fire-rated concrete floor or wood floor/ceiling assemblies. The wrap strips also have the ability to be used within concrete and gypsum wallboard assemblies. Current non-metallic listed applications include PVC, ccPVC, RNC and FRPP piping systems. Can be used in conjunction with 3M™ Fire Barrier Pillows (standard or self-locking) or 3M™ Fire Barrier Mortar to firestop large openings penetrated by non-metallic pipe).

3. Specifications

To be used for penetrations through fire-rated construction with non-metallic penetrating items. 3M™ Fire Barrier Tuck-In Wrap Strips provide through-penetration firestop systems when used in conjunction with 3M™ Fire Barrier Sealants (e.g. 3M™ Fire Barrier Sealant IC 15WB+, 3M™ Fire Barrier Sealant CP 25WB+, 3M™ Fire Barrier Water Tight Sealant 3000 WT)*. When properly installed, these through-penetration firestops help resist the spread of fire, smoke and other gases and help maintain the original fire resistance rating of the construction assembly that has been penetrated. 3M™ Fire Barrier Tuck-In Wrap Strips shall be listed by independent test agencies such as UL, Intertek, or FM and shall be tested under the pass/fail requirements of ASTM E 814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems. These through-penetration firestops meet the current requirements of the International Building Code (IBC) and National Fire Protection Association (NFPA 5000 and NFPA 101).

Typically Specified MasterFormat (2004)

Section 07 84 00 – Firestopping
Section 07 84 13 – Penetration Firestopping
Section 22 00 00 – Plumbing

* Consult specific system details for approved firestop sealants.

4. Performance & Typical Physical Properties

Color:	Gray with Red Liner
Fire Resistance:	1-3 Hours (wall- or floor-rating dependent)
Activation Temperature:	550° F (288° C)
Expansion Volume:	100x

Product Number	Thickness	Width	Length	Nominal Pipe Diameter	Installation Hole Size (max.)
WS 200	3/16 in. (5 mm)	2-1/2 in. (64 mm)	8-1/4 in. strip (210 mm)	2 in. (51 mm)	4 in. (102 mm)
WS 300	3/16 in. (5 mm)	2-1/2 in. (64 mm)	11-1/2 in. strip (292 mm)	3 in. (76 mm)	5 in. (127 mm)
WS 400	3/16 in. (5 mm)	2-1/2 in. (64 mm)	14-7/8 in. strip (378 mm)	4 in. (102 mm)	6 in. (152 mm)
WS Roll	3/16 in. (5 mm)	2-1/2 in. (64 mm)	8.2 ft. roll (2.5 m)	up to 6 in. (152 mm)*	up to 8 in. (203 mm)*

*Installation hole size can be up to two inches larger than nominal pipe diameter.

5. Packaging, Storage, Shelf Life

Packaging 3M™ Fire Barrier Tuck-In Wrap Strips (WS 200, WS 300, WS 400) are packed in a cardboard box containing 24 pre-labeled wrap strips. 3M™ Fire Barrier Tuck-In Wrap Strips WS Roll comes 6 individual rolls per case.

Storage 3M™ Fire Barrier Tuck-In Wrap Strips should be stored indoors in dry conditions.

Shelf Life 3M™ Fire Barrier Tuck-In Wrap Strips shelf life is indefinite when stored in original unopened packaging indoors.

6. Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor / Dealer or Sales Representative for applicable UL, or other third-party, drawings and system details.

Preparatory Work The 3M™ Fire Barrier Wrap Strip should be sized appropriately for the penetrating item. The opening should be clean, dry, free of dust or debris. 3M™ Fire Barrier Wrap Strip WS Roll can be pre-cut to length (note: for a 6-inch pipe, wrap the roll around the pipe twice, mark the length and cut (approx. 44-1/4 in. +/- 1/4 in. (1.12 m +/- 6.4 mm)). 3M™ Fire Barrier Wrap Strip WS Roll can be secured around pipe by using glass-reinforced Scotch® Filament Tape, 3M Aluminum Foil Tape or similar.

Installation Details Install the correct 3M™ Fire Barrier Tuck-In Wrap Strip and 3M™ Fire Barrier Sealant as detailed within the applicable UL, or other third-party, system for the assembly and required system rating(s).

Limitations This product is not acceptable for use with chlorinated polyvinyl chloride (CPVC) pipes.

7. Maintenance

No maintenance should be required when installed in accordance with the applicable independent test agency's listed system and 3M™ Fire Barrier Tuck-In Wrap Strip Installation Guide. Once installed, if any portion of the 3M™ Fire Barrier Tuck-In Wrap Strip is damaged, the entire damaged wrap strip should be removed and re-installed with a new 3M™ Fire Barrier Tuck-In Wrap Strip and new 3M™ Fire Barrier Sealant as detailed within the applicable Listed System.

8. Availability

3M™ Fire Barrier Tuck-In Wrap Strips are available from 3M Authorized Fire Protection Products Distributors and Dealers. 3M™ Fire Barrier Tuck-In Wrap Strips are available for the following nominal pipe diameters: 2 in. WS 200 (51 mm), 3 in. WS 300 (76 mm), 4 in. WS 400 (102 mm) and up to 6 in. WS Roll (152 mm). For additional technical and purchasing information regarding this and other 3M Fire Protection Products, please call: 1-800-328-1687 or visit www.3m.com/firestop.

9. Safe Handling Information

Consult applicable country-of-use Material Safety Data Sheet (MSDS) of any 3M™ Fire Barrier Sealant, Mortar or Pillows used in conjunction with 3M™ Fire Barrier Tuck-In Wrap Strips prior to handling and disposing of that product.

3M

Building and Commercial Services Division
3M Center, Building 223-2N-21
St. Paul, MN 55144-1000 USA
1-800-328-1687
www.3M.com/firestop

Article Information Sheet

This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical or health risk to employees.

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Issue Date:	12/11/14	**Supercedes Date:**	Initial Issue

SECTION 1: Identification

1.1. Product identifier
Tuck In Wrap Strips

Product Identification Numbers
98-0400-5602-4, 98-0400-5603-2, 98-0400-5605-7, 98-0400-5606-5

1.2. Recommended use and restrictions on use

Recommended use
Fire Protection

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Intumescent material	None	60 - 100

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
No need for first aid is anticipated.

SECTION 5: Fire-fighting measures

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Odor, Color, Grade:	Rubber composite with slight odor
Odor threshold	*Not Applicable*
Flash Point	*No Data Available*

Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Density	1.6 g/cm3
Specific Gravity	1.6 [*Ref Std:* WATER=1]
Solubility in Water	Nil
Solubility- non-water	*Not Applicable*
Decomposition temperature	*Not Applicable*

SECTION 10: Stability and reactivity

This material is considered to be non reactive under normal use conditions.

SECTION 11: Toxicological information

Inhalation:
No health effects are expected

Skin Contact:
No health effects are expected

Eye Contact:
No health effects are expected

Ingestion:
No health effects are expected

Additional Information:
This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

SECTION 12: Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

SECTION 13: Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport Information

For Transport Information, please visit **http://3M.com/Transportinfo** or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

For additional regulatory information on this product, refer to www.3M.com/regs.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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