



Firestopping Submittal Package

Project Commercial Drywall (Flat Slab Applications)

Installation Contractor Drywall Interior or FSC



Metacaulk Submittal Retrieval Code: <http://rs.link/sub/rkat-qb7w>



Firestopping Submittal Package

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Intertek does hereby certify that an independent assessment has been conducted on behalf of

RECTORSEAL, LLC

Certificate Number: CA-42996-2025a

Certificate Issue Date: 17 November 2025

Certification valid until: 13 July 2026

Applicant Address: 2601 Spenwick Drive
Houston, TX 77055 USA

Product Category: Building Products

Product Details: See Appendix

Conformance Criteria: California Department of Public Health (CDPH) Standard Method v1.2: Private Office and School Classroom

Issuing Office Name & Address: Intertek Testing Services NA, Inc.
4700 Broadmoor Ave SE, Suite 200
Kentwood, MI 49512 USA
Ph: +1-616-656-7401

Kristen Osterwood
Certification Officer
17 November 2025

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. This certificate is valid only for the specific product model(s), batch, or lot number(s) listed. It is not transferable to other products, even if they are similar in nature. Intertek reserves the right to revoke or modify this certificate if, for example, it is determined that the information provided was inaccurate, incomplete or if the product(s) are found to be non-compliant with applicable safety standards.



Certificate Appendix

RECTORSEAL, LLC

Certificate Number: CA-42996-2025a

Product Type	Adhesives and Sealants
Model Name(s)	BlazeSeal™, Metacaulk® 1000 Sealant, Metacaulk® 1200 Caulk , Metacaulk® 1200 Spray, Metacaulk® 350i Sealant, Metacaulk® Box Guard™, Metacaulk® Cast-In-Place Devices, Metacaulk® Composite Sheet, Metacaulk® Composite Sheet (Galvanized), Metacaulk® Cover Guard™, Metacaulk® Firestop Pillows, Metacaulk® Intumescent Sleeve, Metacaulk® Joint Strip, Metacaulk® MC 150+, Metacaulk® Pass-Thru Device, Metacaulk® Pipe Collars, Metacaulk® Putty Pads, Metacaulk® Putty Sticks, Metacaulk® Wrap Strip, Metacaulk® 835+ Caulk, Metacaulk® 835+ SL, Metacaulk® 835+ Spray, RectorSeal® Smoke and Acoustic Spray & Caulk
Product Restrictions	None
TVOC Range*	Between 0.5 and 5.0 mg/m3

*TVOC range stated is based on the most stringent modeling scenario as listed in the Conformance Criteria on page 1. All values are reported (milligram per cubic meter) corresponding to the LEED v4 TVOC ranges.

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. This certificate is valid only for the specific product model(s), batch, or lot number(s) listed. It is not transferable to other products, even if they are similar in nature. Intertek reserves the right to revoke or modify this certificate if, for example, it is determined that the information provided was inaccurate, incomplete or if the product(s) are found to be non-compliant with applicable safety standards.



March 29, 2023

To Whom It May Concern:

RectorSeal has manufactured specialty sealants in the United States for over eighty years. Our commitment to a safe environment and sustainability extends far beyond our manufacturing processes and traditional thinking. We provide products that meet both NFPA 101: Life Safety Code® requirements and that are certified by the Intertek Clean Air GOLD program. Clean Air GOLD states conformance to ANSI/ BIFMA e3-2019 standard credits 7 .6.1, 7 .6.2 and/or credit 7 .6.3, which includes the California Department of Public Health (CDPH) Standard Method v1.2 01350-2017, as well as conformance to low-emitting materials for LEED.

RectorSeal's firestop products meet and exceed the requirements for the Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™ accreditation point system. Our development practices, along with our high-performance criteria and technical expertise, make us the leader in LEED projects that require firestop products. RectorSeal now has over 1,100 UL listed systems all meeting LEED requirements. We are dedicated to striving for a clean environment and will continue our conscious efforts for a clean environment that started long before being "GREEN" was fashionable.

Our team of experienced and dedicated professionals is committed to continuous improvement in process and product and to your success in firestopping projects. If any questions or concerns arise, please feel free to contact RectorSeal at 1-800-231-3345. Thank you for your business and support.

Best Regards,

RectorSeal



Yanwei Cen, Ph.D
Technical Director



GENERAL CERTIFICATE OF COMPLIANCE

DESCRIPTION:

METACAULK® FIRESTOPPING PRODUCTS

METACAULK® MC 150+ FIRESTOP SEALANT
METACAULK® 350i FIRESTOP SEALANT
METACAULK® 835+ SILICONE SEALANT
METACAULK® 835+ SILICONE SPRAY
METACAULK® 950 FIRESTOP SEALANT
METACAULK® 1000 FIRESTOP SEALANT
METACAULK® 1200
METACAULK® BLAZESEAL™
METACAULK® BOX GUARD™
METACAULK® COMPOSITE SHEET
METACAULK® COVER GUARD™
METACAULK® FIRE-RATED MORTAR
METACAULK® FIRESTOP PILLOW
METACAULK® INDUSTRIAL CABLE COATING
METACAULK® INTUMESCENT SLEEVE
METACAULK® JOINT STRIP
METACAULK® PIPE COLLAR
METACAULK® CID
METACAULK® PUTTY STICK & PUTTY PAD
METACAULK® WRAP STRIP
FLAMESAFE® BAGS
FLAMESAFE® FS 900+ SEALANT
RECTORSEAL® BLAZE FOAM™
RECTORSEAL® SMOKE AND ACOUSTIC SEALANT

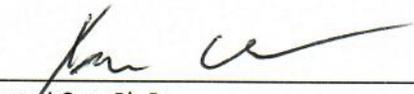
THESE PRODUCTS ARE TESTED ACCORDING TO ONE OR MORE OF THE FOLLOWING STANDARDS:

UL 263 – Fire Tests of Building Construction and Materials
UL 1479 – Fire Tests of Through-Penetration Firestops
UL 2079 – Tests for Fire Resistance of Building Joint Systems
CAN/ULC S101 – Standard Methods of Fire Endurance Tests of Building Construction Materials
CAN/ULC S102 – Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies
CAN/ULC S115 – Standard Method of Fire Tests of Firestop Systems
ASTM E-84 (UL 723) – Surface Burning Characteristics of Building Materials
ASTM E-814 – Fire Tests of Through-Penetration Firestops
ASTM E-2307 – Method for Determining Fire Resistance of Perimeter Fire Barriers
IEEE 1202 – Flame-Propagation Testing of Wire & Cable

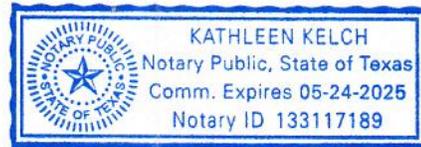
Continued on next page

ALL PRODUCTS CONTAIN NO ASBESTOS OR PCB'S AND ARE CONSIDERED V.O.C. COMPLIANT.

Sworn to and subscribed before me this 14th day of January 2025,

By: 
Yanwei Cen, Ph.D
Technical Director


Kathleen Kelch
Notary Public, State of Texas
County of Harris
My Commission Expires: May 24, 2025





A CSW Industrials Company

April 3, 2023

RE: Metacaulk® Firestopping Materials
LEED® Product Information

TO: Whom It May Concern:

This letter will detail the contribution of Metacaulk® firestopping materials to the LEED Green Building Rating System in accordance with LEED-NC, CS, CI and School Rating Systems.

MR Credit 2.1: Construction Waste Management, Divert 50% from Disposal

MR Credit 2.2: Construction Waste Management, Divert 75% from Disposal

In areas where facilities exist, the following Metacaulk® materials are recyclable and can contribute to earning Materials and Resources Credit 2.1 or Credit 2.2.

• Carton	Cardboard	2 lbs. / carton
• 10.3 oz caulk tube	HDPE	40 g. / tube
• 20.2 oz foil pack Mylar 5 g. / pack	Mylar	5 g. / tube
• 30 oz caulk tube HDPE 98 g. / tube	HDPE	90 g. / tube
• quart bottle HDPE 57 g. / bottle	HDPE	57 g. / bottle
• 5 gallon pail HDPE 934 g. / pail	HDPE	934 g. / pail
• Wooden pallet wood 45 lbs. / pallet	wood	45 lbs. / pallet

MR Credit 5.1: Regional Materials, 10% Extracted, Processed & Manufactured Regionally

MR Credit 5.2: Regional Materials, 20% Extracted, Processed & Manufactured Regionally

Metacaulk® firestopping materials are manufactured in one location Houston, Texas. If these locations fall within a 500-mile radius of the project site and the location the raw materials used to make the finished product are extracted, recovered or harvested within a 500-mile radius of the project, then these materials or a portion of the materials can contribute to earning Materials and Resources Credit 5.1 and Credit 5.2. The following are the locations of the Metacaulk® firestopping materials manufacturing plants:

<u>Metacaulk® Product</u>	<u>Location</u>
All Metacaulk® Products	Houston, Texas

Please contact your local Metacaulk® Representative to request a project specific letter pertaining to Credit 5.1 and Credit 5.2. The letter will provide the location where the raw materials are extracted, recovered or harvested in relation to the location of the project.

EQ Credit 4.1: Low Emitting Materials, Adhesives & Sealants

EQ Credit 4.2: Low Emitting Materials, Paints & Coatings

The volatile organic content (VOC) of Metacaulk® firestopping materials is listed below for those products that are lower than the minimum LEED requirements for low-emitting materials. These materials can help contribute to earning Indoor Environmental Quality EQ Credit 4.1 and 4.2.

<u>Metacaulk Product</u>	<u>EQ Credit</u>	<u>VOC Content (g/l)</u>
Metacaulk® 1000	4.1	10
Metacaulk® 950	4.1	10
Metacaulk® 835+	4.1	10
Metacaulk® MC 150+	4.1	10
Metacaulk® 350i	4.1	10
Metacaulk® Putty pads & Sticks	4.1	10
Metacaulk® 1100	4.2	10
Metacaulk® 1200	4.2	10
Metacaulk® Joint Strip	4.1	10
Metacaulk® Wrap Strip	4.1	10
Metacaulk® 1500	4.1	10
Metacaulk® Industrial Cable Coating	4.2	10
Metacaulk® Pipe Collar	4.1	10
Metacaulk® Intumescent Sleeve	4.1	10
Metacaulk® Fire Rated Mortar	4.1	10
Metacaulk® Firestop Pillows	4.1	10

Please feel free to contact me with any additional questions or information.

Sincerely,

RectorSeal


Yanwei Cen, Ph.D

Technical Director

APPROVALS FOR METACAULK® PRODUCTS

Below is a list of Model Building Codes requiring the use of firestop products in various types of constructions and occupancies. Most local codes are derived from one or more of these model codes. Metacaulk® products and systems meet the through-penetration firestopping requirements of all of these codes.

ICC	International Code Council; International Building Code
ICBO	International Code of Building Officials; Uniform Building Code
SBCCI	Southern Building Code Congress International; Standard Building Code
BOCA	Building Official and Code Administrators International; National Building Code
CABO	Council of American Building Officials (coordinating agency between ICBO, SBCCI and BOCA)
NBCC	National Building Code of Canada
NFPA 101	National Fire Protection Association Life Safety Code
IRC	International Residence Code

Certain cities, counties and states have written their own code requirements which may supersede or supplement model building codes, check with these authorities for approvals.

Metacaulk® Products are UL Classified and conform to the codes and test requirements shown below.

UL 1479	Fire Tests of Through-Penetration Firestops
UL 2079	Tests for Fire Resistance of Building Joint Systems
ASTM E 1966	Standard Test Method for Fire Resistive Joint Systems
ASTM E 814	Methods for Fire Tests of Through-Penetration Fire Stops
NFPA 101	National Fire Protection Association Life Safety Code
ASTM E 84 (UL 723)	Surface Burning Characteristics of Building Materials
ASTM E 119 (UL 263)	Standard Test Methods for Fire Tests of Building Construction and Materials
CAN/ULC S101	Standard Methods of Fire Endurance Tests of Building Construction Materials
CAN/ULC S102	Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies
CAN/ULC S115	Standard Method of Fire Tests of Firestop Systems
B.S. 476/ pr EN1366.3	European/ British Standards
AS 1530.4	Part 4: Fire Resistance Tests of Elements of Building Construction
AS 4072.1	Part 1: Service Penetration and Control Joint
ASTM G21	Testing for Mold and Mildew Growth Resistance

For Questions or Additional Information call RectorSeal Technical Service
1-800-231-3345 ● 1-713-263-8001 or FAX 1-800-441-0051 ● 1-713-263-7577



A CSW Industrials Company

April 18, 2024

RE: Mold Growth

To Whom It May Concern:

This letter certifies that all our firestopping products are protected in a wet stage as well as in a dry stage against mold growth with a combination of biocides.

Sworn to and subscribed before me this 18th day of April 2024:

RectorSeal

By: *Yanwei Cen*
Yanwei Cen, Ph. D
Technical Director

Kathleen Kelch
Kathleen Kelch
Notary Public, State of Texas
County of Harris
My Commission Expires: May 24, 2025





October 8, 2003

Rectorseal
Mr. Randy Clark
2601 Spenwick Dr.
Houston, TX 77055

Our Reference: File R14546, Project 03NK15148

Subject: Movement Cycling of Penetrants in Through-Penetration Firestop System
C-AJ-1480 and C-AJ-5252

Dear Mr. Clark:

Project 03NK15148, File R14546 was established to evaluate the fire resistive performance of various types of firestop systems for use in concrete floor or wall assemblies. The purpose of this investigation was to determine the hourly F and T Ratings of the firestop systems when subjected to a fire exposure and hose stream test in accordance with the Standard, "Fire Tests of Through-Penetration Firestops," ANSI/UL 1479.

As part of this investigation, various size holes were core-drilled through a 48 by 48 by 4-1/2 in. thick lightweight concrete floor slab. A penetrating item was positioned within each through-opening. The annular space between the penetrating item and the periphery of the opening was sealed with a fill material manufactured by Rectorseal. After the fill material reached constant weight, the test assembly was subjected to a fire exposure and hose stream test in accordance with the Standard, ANSI/UL 1479.

Based on the results of the investigation, we have established Through-Penetration Firestop System Nos. C-AJ-1480 and C-AJ-5252 in the Fire Resistance Directory. Attached for your information is the description of the systems.



As requested, prior to the fire exposure and hose stream tests, the penetrants were movement cycled 500 times each in the horizontal and vertical directions. The movement distance was $\frac{1}{4}$ in. in each direction and the rate was 35 cycles/min.

Feel free to contact the writer if you have any questions.

Very truly yours,



KARL AITTANIEMI (Ext. 42719)
Sr. Project Engineer
Fire Protection Division

Reviewed by:



RICHARD N. WALKE (Ext. 43084)
Engineering Group Leader
Fire Protection Division



A CSW Industrials Company

PRODUCT DATA SHEET

METACAULK® 1200

Caulk Grade & Spray Grade Elastomeric Firestop Sealant

Description

The Caulk, Spray and Self Leveling grades of Metacaulk 1200 are a general purpose fire rated sealants for construction joints such as top of the wall, curtain wall perimeter, expansion, control, etc. and for general construction gaps and voids. Metacaulk 1200 is a water based sealant that comes in three different grades. Metacaulk 1200 spray grade is designed for spray applications and provides a fast, economical means of installation on long joint runs. Metacaulk 1200 caulk grade is a non-sag sealant that is easy to apply from a caulk gun, troweled or brushed from the pail and Metacaulk 1200 Self-Leveling is designed to fill and seal gaps, joints, and cracks for horizontal positions and can be apply by using caulking gun or brush. It cures to an elastomeric membrane seal that is suitable where dynamic movement is expected. In the event of a fire, Metacaulk 1200 will prevent the spread of flames, smoke, hot gases and water through the joint openings. No dilution or mixing is required for use. Metacaulk 1200 can be caulked from a tube, brushed or troweled from the pail, or applied with a spray pump.

Metacaulk 1200 systems are rated for up to 3 hour conditions in accordance with ASTM E1966 (UL 2079) (Tests for Fire Resistance of Building Joint Systems), test standards. Metacaulk 1200 has been cycled 500 times, in accordance with the new ASTM E1399 standard. Also tested in accordance with ASTM E814 (UL 1479) for systems up to 4 hours. Metacaulk 1200 is protected in a wet stage as well as in a dry stage against mold growth with a combination of biocides.

Applications

Metacaulk 1200 can be used as a general purpose fire rated sealant and smoke seal for construction joints on both vertical and horizontal surfaces. Metacaulk 1200 is also an excellent fire rated acoustical sealant and can be used in areas under constant vibration or movement.

Packaging



Characteristics | Features

- Sprayable, Brushable, Trowelable, or Caulkable
- Freeze-thaw capable
- Water based
- Flexible - Elastomeric
- Paintable
- VOC compliant
- Excellent smoke seal
- 3 Year shelf life

Code	Size	Qty. per Case	Dimensions (in)	Cubic Feet
Red				
66292	20.2 oz. foil pack	12	9 x 14 x 17	0.51
66015	30 oz cartridge	12	11 x 9 x 17	0.97
66379	5 Gallon	1	13 dia x 14	1.08
66387	5 Gallon caulk grade	1	13 dia x 14	1.08
White				
66525	30 oz. cartridge	12	11 x 9 x 17	0.97
66527	5 Gallon Spray	1	13 dia x 14	1.08
66386	5 Gallon caulk grade	1	13 dia x 14	1.08
66294	20.2 oz. foil pack	12	9 x 14 x 7	0.51
Gray				
66395	5 Gallon Self Leveling	1	13 dia x 14	1.08
66293	20.2 oz. foil pack Self Leveling	12	9 x 14 x 7	0.51

Installation Data

Tightly pack with the appropriate backing material as listed in the selected tested system design. There should be no loose insulation, voids or gaps present. Apply the required coating thickness to completely cover backing material.

For instructions and system listings, refer to Intertek Building Product Directory and UL Product iQ or call RectorSeal.

For Metacaulk 1200 spray application, use recommended spray equipment. Contact Technical Service at 1-800-231-3345 for current recommendations.

For airless sprayer system cleaning, follow manufacturer's instructions for specific equipment used.

Application of Metacaulk 1200 Spray requires airless spray equipment meeting the following specifications:

Working Pressure: Min. 2500 PSI (172 Bar)

Delivery: Min. .72 U.S. gpm (2.7 l/min.)

Recommended Spray Tip Orifice: 0.013 to 0.025 in. (0.53 to 0.64 mm)

Recommended to ensure all parts, seals and contact surfaces are suitable for contact with latex emulsions.

A minimum 3/8" (9.5 mm) fluid line is required, a 1/2" (13 mm) line is preferred. Consult pump manufacturer for long hose runs or lifts to higher elevations. A reversible spray tip is recommended. Recommend to select a spray tip fan pattern to appropriate to minimize over spray. The following airless spray equipment has demonstrated suitability for application of this product.

NOTE: SPRAY EQUIPMENT CAN BE DANGEROUS! USE ONLY BY PROPERLY TRAINED PERSONNEL. FOLLOW ALL SAFETY AND OPERATION INSTRUCTIONS AND PROCEDURES.

Manufacturer Model Number & Description

Titan Tool Inc. 740ix Electric Airless Sprayer

Graco Inc. Ultra Max II 695 Electric Airless Sprayer

Testing Data

Metacaulk 1200 is classified by Underwriters Laboratories Inc. For specific test criteria, refer to UL Product iQ or call RectorSeal.

Metacaulk 1200 has been tested at positive pressure with a minimum 0.01 inches (2.5 Pa) water and in accordance with UL 2079 test standards. Metacaulk 1200 has also been tested to the time-temperature requirements of ASTM E119 (UL 263).

Tested to standards of CAN/ULC S115, S101 and S102.

Sound Transmission Class (STC) 65 - Testing performed in accordance with ASTM E90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

Systems for some applications have been tested for Class 1 W ratings per UL 1479.

Tested by a third party independent laboratory to ASTM G21 with Fungal Growth Rating results of zero.



FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with Flowguard Gold®, BlazeMaster® and Corzan® piping systems and products made with TempRite® Technology. The FBC System Compatible Logo, FBC™, FlowGuard Gold®, BlazeMaster®, Corzan® and TempRite® are trademarks of Lubrizol Advanced Materials, Inc. or its affiliates.

Inspection & Repair

RectorSeal recommends that a firestop system inspection be conducted during installation of the material in accordance with ASTM E2174 and ASTM E2393. In the event post-installation inspection and destructive sampling is necessary, RectorSeal advises repairing the damaged firestop system by replacing any material that was removed or damaged with the same product originally installed, and ensuring the assembly matches the original firestop listing. RectorSeal advises, that due to the chemical nature of firestop products and sealants, material depth should be determined by measuring the points of adhesion at the substrate bond area as sealants may decrease in size during the curing process.

Material Properties

Asbestos Fillers	None
Solvents	None
Hazardous Ingredients	None
Application	Spray, Caulking Gun or Towel
Application Temperature between	40°F - 120°F 4°C - 49°C
Color	Red, White or Gray
Cure Time	5 to 7 days (1/8" at 77°F/25°C)
Density	~10.5 lbs/gal
Flexible	Yes
Skin Over Time	30-45 min. (at 77°F/25°C)
pH Value	7 to 9

Volume Coverage:

per 20.2 oz	36 cu. in.
per 30 oz	54 cu. in.
per 5 gallon pail	1155 cu. in.
VOC	<10 g/l

ASTM E84, UL 723 Tunnel Test

Flame Spread	0
Smoke Index	0

Storage & Handling

Metacaulk 1200 should be stored in unopened container between 35°(2°C) and 120°F (49°C) to obtain a 3 year shelf life.

NOTE: Do not dilute. Do not mix. Mix slightly only if there is color separation..

Limitations

Metacaulk 1200 is not designed to be used in areas under continuous immersion or in areas which would be continuously wet. Metacaulk 1200 should not be used on hot uninsulated surfaces above 200°F (93°C).

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRES, EXPOSURE OR ACCIDENT CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300.

PRECAUTIONARY STATEMENTS: PREVENTION: Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. **RESPONSE:** IF exposed or concerned: Call a POISON CENTER or doctor/physician. **STORAGE:** Store locked up. **DISPOSAL:** Dispose of contents/container in accordance with local regulations. **KEEP OUT OF REACH OF CHILDREN.**

For additional information, refer to Safety Data Sheet.

 **WARNING:** This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

Manufacturer Model Number & Description

Titan Tool Inc. 740ix Electric Airless Sprayer

For more detailed information on the above sprayer visit
<https://www.titantool.com/impact-740.html>

Graco Inc. Ultra Max II 695 Electric Airless Sprayer

For more detailed information on the above sprayer visit
<https://www.graco.com/us/en/contractor/product/17e577-ultra-max-ii-695.html>

METACALK 1200 COVERAGE RATE:

NOTE: Coverage rates as given are mathematical calculations. Allow for application losses, opening size variations and applied thickness variations. (Verify all calculations)

Based on 3" fluted metal deck with 3/4" relief joint.

Opening Width (inches)	*Coverage Rate in Lineal Feet Per Gallon at Application Thickness of 1/8 inch
1/2	102
3/4	88
1 1/2	61
2	51
2 1/2	44
3	38
3 1/2	34
4	30
5	25
6	22

*Calculation includes 1/2" overlap along both edges of opening

METACALK RECOMMENDS THE USE OF AIRLESS PAINT SPRAYERS TO APPLY METACALK 1200

Recommended Spray Equipment

Graco Ultramax II 595 and 695 series sprayers or equivalent

Titan Impact 640 and 740 series sprayers or equivalent

Sprayers must be capable of a minimum of .70 gallons per minute volume at 2,800 psi with up to a .027-inch tip size.

Sprayer Set Up

1. Remove all internal filters from sprayer and spray gun (if equipped).
2. Use minimum 3/8-inch hose for hose lengths up to 50 feet and minimum 1/2-inch hose for hose lengths over 50 feet up to 100 feet.
3. Ensure pump is properly lubricated prior to operating equipment.
4. Connect hose to pump and hose to spray gun, ensuring all fittings are air tight.
5. Connect sprayer to properly grounded electrical supply with appropriate voltage for the spray pump.
6. Remove tip guard for priming process.
7. Relieve any pressure in the system by depressing the trigger on the spray gun, rotate the prime valve open and closed during this process to ensure any back pressure is removed.
8. Prime the spray pump by inserting the spray pump's siphon tube into the firestop material to be used, it is best practice to place the prime tube outside of the material container and into an appropriate receptacle to capture any cleaning solution or residual material.
9. With prime valve in the open position, turn the pressure controller to its lowest level and turn the pump on, with the pump on, gradually increase pressure to allow material to flow through the prime tube into the catch receptacle until there is no visible air exiting the prime tube and only a continuous flow of the material to be sprayed.
10. The prime valve can now be rotated to the closed position and increase pump pressure to the level required to apply material, usually 1,800 to 2,500 psi. with the spray guard removed point the spray gun into the catch receptacle used for the prime tube or another appropriate area and depress the spray gun trigger until the material to be applied flows through the gun without air or cleaning residue present.
11. Install the appropriate tip and tip guard onto the spray gun with the tip for joint width, material depth and material type. Always confirm tip and pressure settings on a test area before commencing work.
12. Adjust the pressure of the spray pump until the desired spray pattern is achieved, increase spray pressure to eliminate heavy edges, if spray continues to be heavier on the outside edges change spray tip to a smaller orifice size.

Application

1. Use even continuous movements maintaining a consistent distance from the substrate surface to apply spray material ensuring spray coverage as required by the testing and installation instructions.
2. If the spray tip becomes clogged, rotate the spray tip to the clean position and discharge the spray gun into an appropriate receptacle until the clog is removed.
3. Rotate the tip back to the spray position for use.

Cleaning & Maintenance

Clean the spray pump, hose and sprayer at the end of usage daily. Do not let the spray pump sit with material inside for prolonged periods.

Water based products use warm water with a mild detergent, using a minimum of 10 gallons or until the cleaning material flows clearly through the spray pump.

1. To clean the spray pump, turn the power off and remove pressure from the spray pump and spray gun.
2. Insert the siphon tube into the cleaning fluid and remove the spray tip guard
3. Follow the process of priming and setting up the spray pump as outlined previously to run at least 5 gallons of the cleaning solution through the spray pump after it has been primed, recycling the cleaning material into the cleaning fluid bucket.
4. Circulate 5 gallons of the cleaning fluid through the system on normal spray mode dispensing and recycling spray material into the bucket of cleaning liquid.
5. With a new 5 gallon pail of cleaning solution cycle the material through the equipment dispensing the cleaning material into a separate 5 gallon pail.
6. Repeat this process with cleaning solution and discharge the material into a separate bucket until the discharged cleaning material flows without residue of firestop material and cleaning solution is contaminant free.

Tip Guide

Recommended are tip sizes ranging from .015-.019 and fan patterns from 2 to 4.

The first number is 1/2 of the spray fan width at 12 inches so a .225 would have a 4-inch-wide fan pattern. The second 2 numbers represent the orifice size, in the case above this would be a .025 spray tip opening.

Limited Warranty



For more information on our product warranty, visit rectorseal.com.



Manufactured by

RectorSeal, LLC

2601 Spenwick Drive • Houston, TX 77055, USA • 800-231-3345 • Fax 800-441-0051 • rectorseal.com

3255 Wyandotte St East Windsor, ON N8Y 1E9 • Canada • 519-966-4901

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A CSW Industrials Company

PRODUCT DATA SHEET

METACAULK® 150+ General Purpose Firestop Sealant

Description

Metacaulk® 150+ is a one component, general purpose fire rated sealant, acoustic sealant and smoke seal for construction joints and through-penetrations. Metacaulk 150+ is a water based, non-sag caulking grade sealant that is easy to apply as well as retrofit. It cures to an elastomeric seal that is suitable where dynamic movement is expected. In the event of a fire, Metacaulk 150+ will prevent the spread of flames, smoke, hot gases and water through joint openings and through-penetrations. No dilution or mixing is required for use. No special skills are necessary for installation. Metacaulk 150+ is applied with a conventional caulking gun, bulk loading gun or can be troweled from the pail. For large applications, it can be pumped directly from the pail. Metacaulk 150+ systems are rated for up to 4 hours in accordance with ASTM E814 (UL 1479) and ASTM E1966 (UL 2079) test standards. Metacaulk 150+ is protected in a wet stage as well as in a dry stage against mold growth with a combination of biocides.



Applications

Metacaulk 150+ can be used in interior applications as a general purpose fire rated sealant, acoustic sealant and smoke seal for construction joints on both vertical and horizontal surfaces. Metacaulk 150+ is also an excellent fire rated acoustical sealant and can be used in areas under constant vibration or movement. Metacaulk 150+ can also be used on various penetrations such as EMT, telephone & power cables in concrete floors and walls, gypsum walls as well as wood floors. Use Metacaulk 150+ to prevent the spread of fire and smoke through joints in fire rated gypsum wallboard partitions, concrete block or concrete walls and/or concrete or corrugated steel deck floor/ceiling assemblies.

Characteristics | Features

- Water based
- Excellent freeze-thaw
- Flexible set
- Paintable
- VOC compliant
- Safe and easy to use
- 3 Year shelf life
- STC rating 65

Packaging

Code	Size	Qty. per Case	Dimensions (in)	Cubic Feet
Red				
66648	10.3 oz cartridge	12	8x6x12	0.34
66385	20.2 oz foil pack	12	9x14x7	0.51
66383	30 oz. cartridge	12	11x9x17	0.97
66389	5 Gallon	1	13 dia x14	1.08
Gray				
66424	20.2 oz foil pack	12	9x14x7	0.51
66425	5 gallon	1	13 dia x 14	1.08
White				
66396	20.2 oz foil pack	12	9x14x7	0.51

METACAULK® 150+

General Purpose Firestop Sealant

Installation Data

Install Metacaulk 150+ using standard caulking techniques or trowel from pails. Metacaulk MC 150+ may also be pumped from the pails. When damming materials are needed, use only materials approved for the specific application.

TYPICAL GYPSUM WALLBOARD INSTALLATION

Step 1 Cut opening in wall.

Step 2 Clean penetration opening and surfaces from loose debris, dirt, oil and wax.

Step 3 If required, install sleeve and backing material.

Step 4 Gun the sealant as required to the specified depth. Trowel surface flush with wall.

Consult third part testing agency product listing directory for complete instructions and system listings.

Testing Data

For specific test criteria, refer to Intertek Directory and UL Product iQ or call RectorSeal.

Metacaulk 150+ was tested at positive pressure with a minimum 0.01 inches of water (2.5 Pa) and in accordance with ASTM E814 (UL 1479), ASTM E1966 (UL 2079). Tested to the time-temperature requirements of ASTM E119 (UL 263). L rating > 1 cfm cu.ft. Class 1 W-Rated.

Sound Transmission Class (STC) 65 - The test was performed in accordance with ASTM E90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

Tested to standards of CAN/ULC S115, S101 and S102.

Tested by a third party independent laboratory to the ASTM G21 standard with Fungal Growth Rating results of zero.



FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with Flowguard Gold®, BlazeMaster® and Corzan® piping systems and products made with TempRite® Technology. The FBC System Compatible Logo, FBC™, FlowGuard Gold®, BlazeMaster®, Corzan® and TempRite® are trademarks of Lubrizol Advanced Materials, Inc. or its affiliates.

Inspection & Repair

RectorSeal recommends that a firestop system inspection be conducted during installation of the material in accordance with ASTM E2174 and ASTM E2393. In the event post-installation inspection and destructive sampling is necessary, RectorSeal advises repairing the damaged firestop system by replacing any material that was removed or damaged with the same product originally installed, and ensuring the assembly matches the original firestop listing. RectorSeal advises, that due to the chemical nature of firestop products and sealants, material depth should be determined by measuring the points of adhesion at the substrate bond area as sealants may decrease in size during the curing process.

Material Properties

Asbestos Fillers	None
Solvents	None
Hazardous Ingredients	None
Application	Caulking Gun or Trowel
Application Temperature between	40°F - 120°F 4°C - 49°C
Color	Red / Gray / White
Cure Time	3 to 4 weeks (at 77°F/25°C)
Density	12.5 lbs/gal
Elastomeric	Yes
Freeze/Thaw	Excellent
Skin Over Time	30 min. (at 77°F/25°C)
pH Value	7 to 8

Volume Coverage:

for 10.3 oz. tube (304 ml) 18 cu. in.

for 20.2 oz. foil packs (597 ml) 36 cu. in.

for 30 oz. tube (887 ml) 54 cu. in.

for 5 gallon (18.9 liter) 1155 cu. in.

VOC < 10 g/l

ASTM E84, UL 723 Tunnel Test

Flame Spread 10

Smoke Index 0

METACALK® 150+

General Purpose Firestop Sealant

Storage & Handling

Metacalk 150+ should be stored between 35°F (2°C) and 120°F (49°C) to obtain a 3 year shelf life.

NOTE: Do not dilute, no mixing is required. Best if protected from freezing. If freezing occurs, thaw completely before using. Keep products stored under protective cover in original containers.

Limitations

Metacalk 150+ is not designed to be used in areas under continuous immersion or in areas which would be continuously wet. Metacalk 150+ should not be used against hot uninsulated surfaces above 300°F (149°C).

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC-DAY OR NIGHT 1-800-424-9300.

KEEP OUT OF REACH OF CHILDREN.

For additional information, refer to Safety Data Sheet.

Limited Warranty



For more information on our product warranty, visit rectorseal.com.



Manufactured by

RectorSeal, LLC

2601 Spenwick Drive • Houston, TX 77055, USA • 800-231-3345 • Fax 800-441-0051 • rectorseal.com

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BLAZE FOAM™

Compressible Intumescent Firestop Foam

Description

Blaze Foam™ is intumescent compressible foam used to firestop head of wall, wall to wall and bottom of wall joint applications both dynamic and static.

Applications

Blaze Foam is installed on dynamic and static joints for head of wall, wall to wall, and bottom of wall. Designed for installation within resistive joints with up to 2 hours F rating, Blaze Foam provides dynamic movement with up to 50% compression (see UL systems) and 50% extension capabilities for max joint width 3/4" to 1 inch.



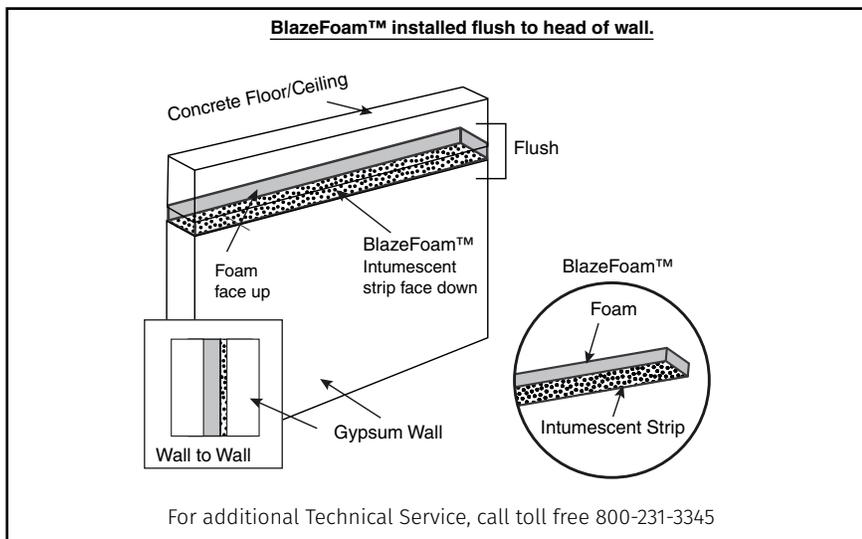
Packaging

Code	Size	Qty. per Case
66024	48" x 5/8" x 1"	80

Characteristics | Features

- Up to 50% compression
- 50% extension capabilities for max joint width 3/4" to 1 inch.
- Up to 2 hours F rating
- Dynamic movement

Installation Data



Foam is simple to install for head of wall applications. Compress the Blaze Foam into the joint between the top of the wall and bottom of the deck so that the intumescent strip is facing the wall surface. Blaze Foam can be recessed into the joint or installed flush with the outside surface of the wall. Joints are butted together. No mechanical fastening of Blaze Foam is required.

Testing Data

Blaze Foam has been tested to ANSI/UL 2079, 5th Edition at RectorSeal Fire Test Laboratory.

STC Rating 64

Inspection & Repair

RectorSeal recommends that a firestop system inspection be conducted during installation of the material in accordance with ASTM E2174 and ASTM E2393. In the event post-installation inspection and destructive sampling are necessary, RectorSeal advises repairing the damaged firestop system by replacing any material that was removed or damaged with the same product originally installed, and ensuring the assembly matches the original firestop listing.

Storage & Handling

The foam should be stored in a cool, dry place between 0°F (-18°C) to 120°F (49°C) to obtain a minimum 10-year shelf life. Keep products stored under a protective cover, in their original containers. A stock rotation program is recommended.

Limitations

To be used only in the tested configurations or as recommended by RectorSeal. Blaze Foam is not used in joints that require movement greater than 1”.

Cautions

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC-DAY OR NIGHT 1-800-424-9300.

PRECAUTIONS: Do not take internally. May be harmful if swallowed. May cause eye and skin irritation if prolonged or repeated contact occurs. Wash after handling. **FIRST AID:** For any overexposure, get immediate medical attention after first aid is given. **Eyes-** Flush 15 minutes with clean water. **Skin-** Wash with soap and water. **Inhalation-** Remove to fresh air. **Ingestion-** Only if conscious, give large amounts of water and INDUCE VOMITING. **FIRE AND SPILLS:** Use water fog, CO₂ foam, or dry chemicals. Wipe up spills to prevent footing hazard. Clean up with scrapers and water. **STORAGE AND HANDLING:** Store away from heat sources. Keep container closed. Do not reuse empty container. **KEEP OUT OF REACH OF CHILDREN.**

Material Properties

Asbestos Fillers	None
Solvents	None
Hazardous Ingredients	None

Activation of Intumescence:

Expansion Begins	375°F (190°C)
Expansion Greatest	575°F — 1100°F 302°C — 593°C

Color	Charcoal
Storage	0°F — 120°F -18°C — 49°C

US Patent No. 9,683,364 licensed from CEMCO Inc.

Limited Warranty

RectorSeal, LLC makes the Limited Express Warranty that when the instructions for storage and handling of our products are followed we warrant our products to be free from defects. THIS LIMITED EXPRESS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION ON THE PART OF RectorSeal, LLC. The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and RectorSeal, LLC shall not be liable for incidental or consequential damages.



Manufactured by **RectorSeal LLC • 2601 Spenwick Drive, Houston, TX 77055, USA • 800-231-3345 • Fax 800-441-0051 • RectorSeal.com**

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METACAULK 1200

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 4/24/2024 Revision date: 5/7/2024 Supersedes: 4/24/2024 Version: 1.2

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : METACAULK 1200
Product code : 66379, 66527, 66015, 66387, 66525, 66386, 66294

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

RectorSeal, LLC
2601 Spenwick Drive
Houston, Texas 77055
USA
T (800)-231-3345 or (713)263-8001
www.rectorseal.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1.800.424.9300
Outside USA and Canada: +1.703.527.3887
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

METACALK 1200

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Exercise caution. Spill area may be slippery.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Neoprene or nitrile rubber gloves

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR), Neoprene rubber (HNBR)	2 (> 30 minutes)	0.3 mm - 0.6 mm	
Eye protection:				
Wear eye protection				
Skin and body protection:				
Wear suitable protective clothing				
Respiratory protection:				
No respiratory protection needed under normal use conditions				

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Color	: red or white
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Odourless In moist air: Ammonia odour Characteristic odour Almost odourless Mild odour
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: 100 °C
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: > 25 mm ² /s
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: < 1 % Concentration by weight
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

METACAULK 1200

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: > 25 mm ² /s
Symptoms/effects after inhalation	: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

METACAULK MC 1200 WHITE SPRAY

Persistence and degradability	Not rapidly degradable
-------------------------------	------------------------

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

METACALK 1200

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Copper Nitrate	CAS-No. 3251-23-8	0.00006 – 0.000068%
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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

WARNING:

This product can expose you to Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

METACALK 1200

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Component	State or local regulations
Magnesium nitrate(10377-60-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Copper Nitrate(3251-23-8)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Titanium dioxide(1317-80-2)	U.S. - Massachusetts - Right To Know List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Aliphatic alcohol(111-87-5)	U.S. - Pennsylvania - RTK (Right to Know) List
3-iodo-2-propynyl butylcarbamate(555406-53-6)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
SODIUM HYDROXIDE(1310-73-2)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Ethylene Oxide(75-21-8)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS); U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 5/7/2024

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



METACAULK MC 150+

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 3/6/2024 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : METACAULK MC 150+

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

RectorSeal, LLC
2601 Spenwick Drive
Houston, Texas 77055
USA
T (800)-231-3345 or (713)263-8001
www.rectorseal.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1.800.424.9300
Outside USA and Canada: +1.703.527.3887
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
4-hydroxy-4-methyl-2-pentanone	CAS-No.: 123-42-2	5 – 10	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation:vapour), H331 Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

METACALK MC 150+

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Exercise caution. Spill area may be slippery.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4-hydroxy-4-methyl-2-pentanone (123-42-2)

USA - ACGIH - Occupational Exposure Limits

Local name	Diacetone alcohol
------------	-------------------

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4-hydroxy-4-methyl-2-pentanone (123-42-2)	
ACGIH OEL TWA	50 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Diacetone alcohol (4-Hydroxy-4-methyl-2-pentanone)
OSHA PEL TWA	240 mg/m ³
	50 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

Wear protective clothing

Hand protection:

Neoprene or nitrile rubber gloves

Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR), Neoprene rubber (HNBR)		0.3 mm - 0.6 mm	

Eye protection:

Wear eye protection

Skin and body protection:

Wear protective clothing

Respiratory protection:

No respiratory protection needed under normal use conditions

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Color	: red
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Odourless Characteristic odour Almost odourless Mild odour Pleasant odour Sweet odour
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available

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Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: > 25 mm ² /s
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

4-hydroxy-4-methyl-2-pentanone (123-42-2)

LD50 oral rat	3002 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2738 - 3290
LD50 oral	4000 mg/kg
LD50 dermal rat	> 1875 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 1875 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapours)	≥ 7.6 mg/l Source: ECHA
ATE US (oral)	3002 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (vapors)	3 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

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4-hydroxy-4-methyl-2-pentanone (123-42-2)	
LOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (oral,rat,90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation,rat,vapor,90 days)	≥ 4.106 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : Not classified

Viscosity, kinematic : > 25 mm²/s

4-hydroxy-4-methyl-2-pentanone (123-42-2)	
Viscosity, kinematic	1.966 mm ² /s

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

4-hydroxy-4-methyl-2-pentanone (123-42-2)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): <i>Oryzias latipes</i>
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
ErC50 algae	> 1000 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)
LOEC (chronic)	> 100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'

12.2. Persistence and degradability

METACAULK MC 150+	
Persistence and degradability	Not rapidly degradable

4-hydroxy-4-methyl-2-pentanone (123-42-2)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.07 g O ₂ /g substance
Chemical oxygen demand (COD)	2.11 g O ₂ /g substance
ThOD	2.21 g O ₂ /g substance

12.3. Bioaccumulative potential

4-hydroxy-4-methyl-2-pentanone (123-42-2)	
Partition coefficient n-octanol/water (Log Pow)	1.9 (Read-across, Equivalent or similar to OECD 117)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

4-hydroxy-4-methyl-2-pentanone (123-42-2)	
Ecology - soil	Low potential for adsorption in soil.

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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. US State regulations

⚠ WARNING: This product can expose you to Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
SODIUM HYDROXIDE(1310-73-2)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Aliphatic alcohol(111-87-5)	U.S. - Pennsylvania - RTK (Right to Know) List
3-iodo-2-propynyl butylcarbamate(555406-53-6)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
Titanium dioxide(1317-80-2)	U.S. - Massachusetts - Right To Know List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
amorphous silica(7631-86-9)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List
iron(III) oxide(1309-37-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
chalk(1317-65-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
quartz, 1%≤conc respirable crystalline silica<10%(14808-60-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Ethylene Oxide(75-21-8)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS); U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
4-hydroxy-4-methyl-2-pentanone(123-42-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H226	Flammable liquid and vapor
H312	Harmful in contact with skin
H319	Causes serious eye irritation

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Full text of H-phrases	
H331	Toxic if inhaled

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



SAFETY DATA SHEET

RECTORSEAL® BLAZE FOAM™
Intumescent compressible foam

SDS 0478

SECTION 1 – PRODUCT AND COMPANY INFORMATION

Product Name
RectorSeal Blaze Foam

Product Codes
66021, 66024

Chemical Family
Organic/Inorganic

Use
Firestopping material

Manufacturer's Name
RectorSeal. LLC
2601 Spenwick Drive
Houston, Texas 77055 USA

Date of Validation
March 23, 2022

Date of Preparation
April 24, 2017

HMIS Codes

Health	1
Flammability	0
Reactivity	0
PPI	B

Emergency Telephone No.
Chemtrec 24 Hours
(800)-424-9300 USA
(703)-527-3887 International

Technical Service Telephone No.
(800)-231-3345 or (713)-263-8001

SECTION 2 – HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Physical Hazards:

None

Health Hazards

Acute Toxicity:

- Oral: Not Classified
- Dermal: Not Classified
- Inhalation: Not Classified
- Skin Corrosion/Irritation: Not Classified
- Serious Eye Damage/Eye Irritation: Not Classified
- Respiratory or Skin Sensitization: Not Classified
- Germ Cell Mutagenicity: Not Classified
- Carcinogenicity: Not Classified
- Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements:
None

Precautionary Statements:
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Labeling Symbols: None

Risk R-Phrases: None

Safety S-Phrases:
S2: Keep out of the reach of children.

Summary Of Acute Hazards

May cause skin irritation.

Route Of Exposure, Signs And Symptoms

INHALATION

Not a respiratory irritant.

EYE CONTACT

Contact may cause eye irritation.

SKIN CONTACT

Contact may cause skin irritation.

INGESTION

Possible irritation to mucous membranes of the mouth, throat, and stomach.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Persons with pre-existing skin conditions or chemical allergies may be more susceptible to contact effects of the cured elastomer.

RECTORSEAL® BLAZE FOAM™

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.			

SECTION 4 – FIRST AID MEASURES

If inhaled:	Not a respiratory irritant.
If on skin:	Wash with soap and water. If irritation occurs, seek medical attention.
If in eyes:	Immediately flush with large amounts of water. If irritation occurs, seek medical attention.
If swallowed:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Foam, dry chemical, carbon dioxide or water fog.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus (SCBA) and other protective clothing.

Unusual Fire And Explosion Hazards: Fire conditions will activate product causing intumescence to occur.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Pick up debris to prevent footing hazard.

SECTION 7 – HANDLING AND STORAGE

Precautions To Be Taken In Handling And Storing: Do not store near heat, sparks, or open flames.

Other Precautions: KEEP OUT OF REACH OF CHILDREN.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection (Specify Type): None required.

Ventilation – Local Exhaust: N/A

Special: N/A

Mechanical (General): N/A

Other: N/A

Protective Gloves: None required.

Eye Protection: None required.

Other Protective Clothing Or Equipment: None required.

Work/Hygienic Practices: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling point:	N/A
Specific gravity (H ₂ O = 1):	N/A
Vapor pressure (mmHg):	N/A
Melting point:	N/A
Vapor Density (Air = 1):	N/A
Evaporation rate (Ethyl Acetate = 1):	N/A
Appearance/Odor:	Black/Mild odor
Solubility in water:	Insoluble
Volatile Organic Compounds (VOC) Content (theoretical percentage by weight):	< 1% or < 10 g/L
Flash point:	None
Lower explosion limit:	N/D
Upper explosion limit:	N/D

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Conditions To Avoid: None.

Incompatibility (Materials To Avoid): None known.

Hazardous Decomposition Products: CO, CO₂ and fragmented hydrocarbons.

Hazardous Polymerization: Will not occur.

SECTION 11 – TOXICOLOGY INFORMATION

Chronic Health Hazards

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Toxicology Data

Ingredient Name

None

SECTION 12 – ECOLOGICAL INFORMATION

Ecological Data

Ingredient Name:	None
Food Chain Concentration Potential	N/A
Waterfowl Toxicity	N/A
BOD	N/A
Aquatic Toxicity	N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste

Disposal Method: Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

SECTION 14 – TRANSPORTATION INFORMATION

DOT:	Non-regulated
Ocean (IMDG):	Non-regulated
Air (IATA):	Non-regulated
WHMIS (Canada):	Non-regulated

SECTION 15 – REGULATORY INFORMATION

Regulatory Data

Ingredient Name:	None
SARA 313	N/A
TSCA Inventory	All components listed
CERCLA RQ	N/A
RCRA Code	N/A

SECTION 16 – OTHER INFORMATION

Labeling Symbols: None

Risk R-Phrases: None

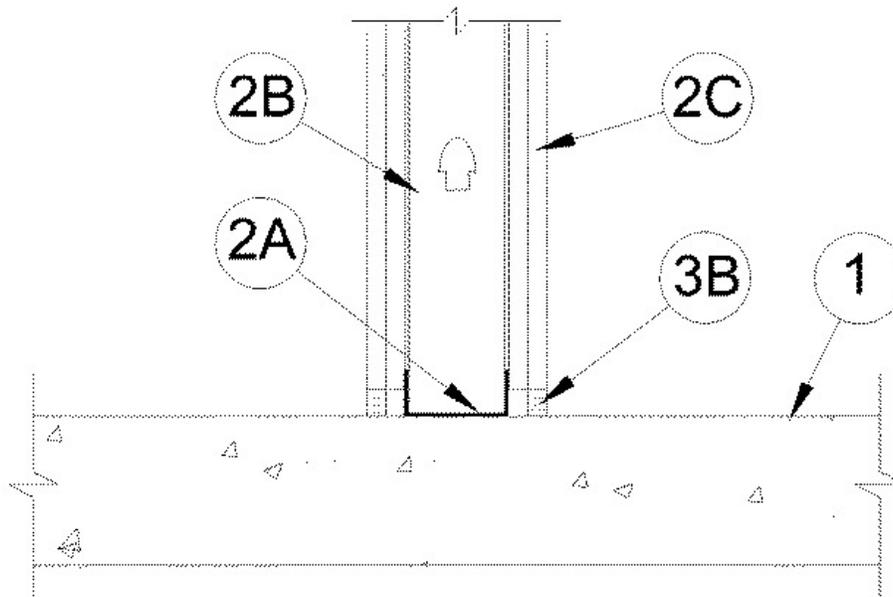
Safety S-Phrases:

S2: Keep out of the reach of children.

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made.

Consult RectorSeal for further information: (713) 263-8001

Assembly Ratings — 1 and 2 Hr (See Item 2)
Joint Width — 3/4 in. Max



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***.

See **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names of manufactures.

2. Wall Assembly — The 1 or 2 h fire rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. Steel Floor Runner — Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runners to be provided with min 1-1/4 in. (32 mm) flanges. Runners secured with steel fasteners spaced max 24 in. (610 mm) OC.

B. Studs — Min size as specified in the individual design. Studs cut 3/8 to 5/8 in. (10 to 16 mm) less in length than assembly height with bottom nesting in, resting on and fastened to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. (610 mm) OC.

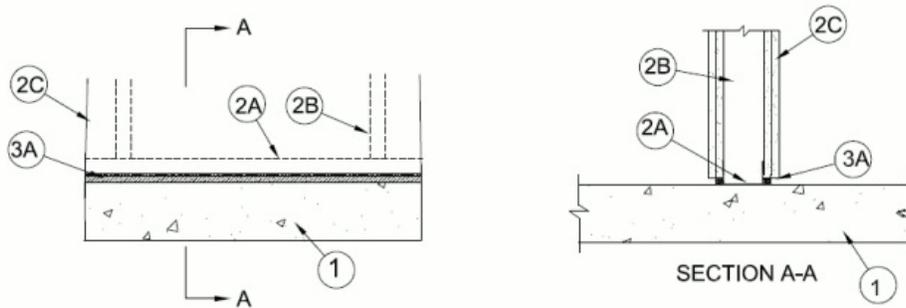
C. Gypsum Board* — Gypsum board installed to a min total thickness of 5/8 or 1-1/4 in. (16 or 32 mm) on each side of wall for a 1 or 2 hr rated wall, respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory, except that a max 3/4 in. (19 mm) gap shall be maintained between the bottom of gypsum board and top of concrete floor.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3 Fill, Void or Cavity Material* - Caulk — Max separation between top of floor and bottom of gypsum board is 3/4 in. (19 mm). Min 5/8 in. (16 mm) thickness of fill material installed on each side of the wall between the bottom of the gypsum board and the top of the concrete floor, flush with each surface of the wall.

RECTORSEAL — [Metacaulk 150+](#), 1000, 1100, 350i, 835+ or 1200

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1/2 In.	FT Ratings — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less than 1 CFM/Lin Ft	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating at 400° F — Less than 1 CFM/Lin Ft	FTH Ratings — 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 1/2 In. (13 mm)
	L Rating at Ambient — Less than 1.5 L/s/Lin M
	L Rating at 400° F — Less than 1.5 L/s/Lin M



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.

2. 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 U400, V400 Series or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor Runners — Floor runners of wall assembly shall consist of min No. 25 ga galv steel channels sized to accommodate steel studs (Item 2B) with min 1-1/4 in. (32 mm) flanges. Ceiling runner is secured to concrete floor with steel fasteners spaced max 12 in. (305 mm) OC.

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and secured to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. (610 mm) OC.

C. Gypsum Board* — Gypsum board sheets installed to a min total thickness of 5/8 in. and 1-1/4 in. (16 and 32 mm) on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a max 1/2 in. (13 mm) gap shall be maintained between the bottom of the gypsum board and the top surface of the concrete floor.

The hourly fire rating of the joint system is dependent on the hourly fire rating of the wall assembly in which it is installed.

3. Joint System — The joint system consists of the following:

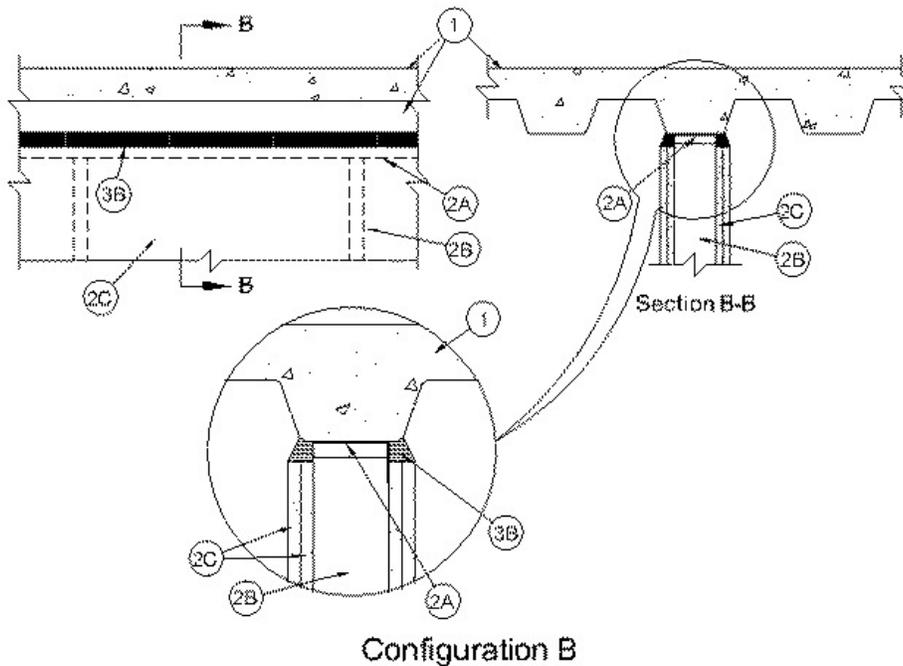
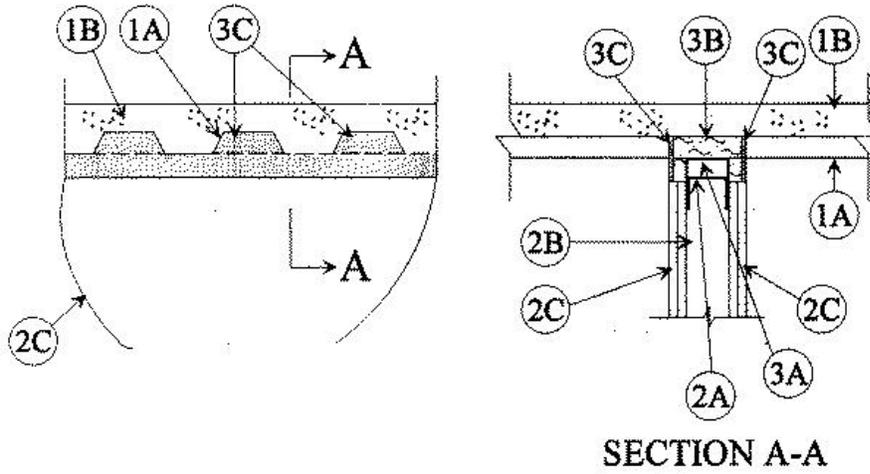
A. Fill, Void or Cavity Material* — Nom 1-1/2 in. (38 mm) high by 5/8 in. (16 mm) thick foam with integral 1.5 mm by 5/8 in. (16 mm) wide intumescent strip adhered to top surface. BlazeFoam to be compressed and inserted into joint between gypsum board and concrete floor, against the floor runner, with the intumescent strip positioned at top of joint against the cut edge of the gypsum board. BlazeFoam is supplied in varying lengths and shall be cut to length and friction fit within the joint with ends tightly butted. **Blaze Foam** applied within joint opening on both sides of wall.

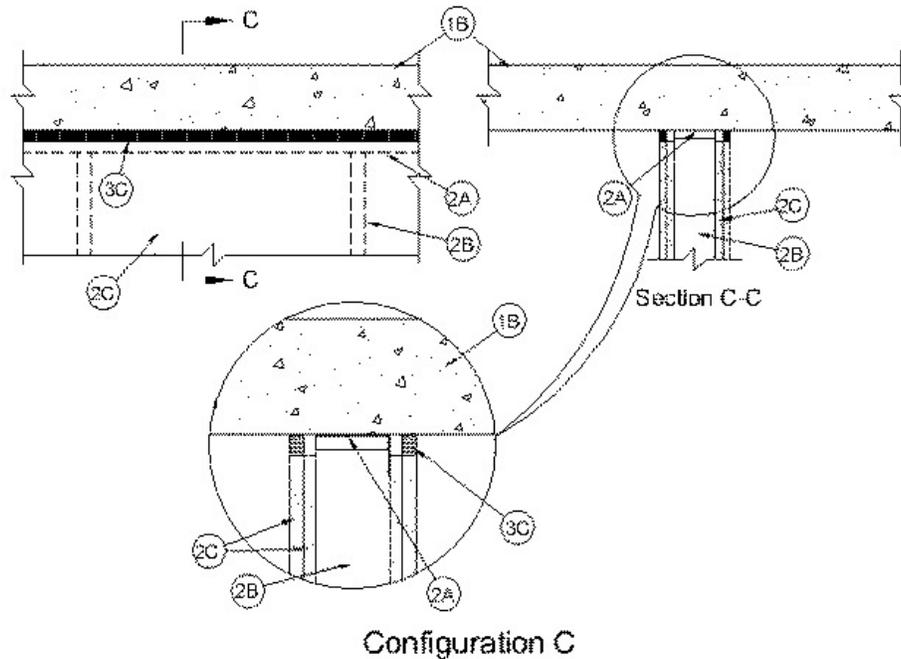
RECTORSEAL — **Blaze Foam**

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ANSI/UL2079	CAN/ULC S115
Assembly Rating - 1 and 2 Hr (See Item 2)	F Rating - 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 In.	FT Rating - 1 and 2 Hr (See Item 2)
Class II Movement Capabilities - 25% Compression	FH Rating - 1 and 2 Hr (See Item 2)
	FTH Rating - 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 1 In.
	Class II Movement Capabilities -25% Compression





1. Floor Assembly — The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Form Units* — Max 3 in. (76 mm) deep galv steel fluted floor units.

B. Concrete — Min 3 in. (76 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, as measured from the top plane of the floor units.

1A. Roof Assembly — (Not Shown) — As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. Steel Roof Deck Max — Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the roof deck.

C. Roof Covering — Hot-mopped or cold application materials compatible with concrete.

1B. Floor Assembly — As an alternate to the floor and roof assemblies (Items 1 and 1A), the floor may consist of a min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete slab.

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

A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with min 1-1/4 in. (32 mm) flanges. Studs and gypsum board must have a min 1/4 in. (6 mm) engagement onto the flanges of the ceiling runner at the furthest point of extension of the joint. Ceiling runner installed perpendicular to steel deck (Configuration A) or centered on valleys of steel deck (Configuration B). When U shaped deflection channel (Item 3A) is used, ceiling runner is installed within the U-shaped deflection channel with 1 in. (25 mm) gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, ceiling runner secured to valleys with steel masonry anchors or by welds spaced max 24 in. (610 mm) OC. When concrete slab floor assembly (Item 1B) is used and deflection channel is not used, ceiling runner secured to concrete floor slab (Configuration C) with steel masonry anchors spaced max 24 in. (610 mm) OC.

A1. Light Gauge Framing* - Slotted Ceiling Runner — Slotted ceiling runner may be used as an alternate to the ceiling runner in Item 2A. Slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner secured to valleys of steel deck with steel masonry anchors spaced max 24 in. (610

mm) OC. When concrete slab floor assembly (Item 1B) is used, slotted ceiling runner secured to concrete floor slab with steel masonry anchors spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.

SCAFCO STEEL STUD MANUFACTURING CO

BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS— SLP-TRK

MARINO/WARE, DIV OF WARE INDUSTRIES INC— Type SLT

TELLING INDUSTRIES L L C— True-Action Deflection Track

A2. Light Gauge Framing* —Vertical Deflection Clip* — (Optional) Steel clips can be used in conjunction with steel studs (Item 2B), ceiling runner (Item 2A) or deflection channel (Item 3A). Clips installed over the top of studs and inserted within the ceiling runner or deflection channel. Clip shall be secured to the ceiling runner or deflection channel with No. 8 self drilling, self tapping steel fasteners through holes provided within the clip. Clip may be secured to the stud with No. 6 pan head steel screw through holes provided within the clip. As an alternate, the legs of the clip may be installed over the top of the stud without attachment in accordance with manufacturer's installation instructions.

FLEX-ABILITY CONCEPTS L L C— Three Legged Dog Deflection Clip

A3. Light Gauge Framing*- Notched Ceiling Runner — As an alternate to the ceiling runners in Items 2A through 2A3, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner secured to valleys of steel deck with steel masonry anchors spaced max 24 in. OC. When concrete slab floor assembly (Item 1B) is used, slotted ceiling runner secured to concrete floor slab with steel masonry anchors spaced max 24 in. (610 mm) OC. When notched ceiling runner is used, deflection channel (Item 3A) shall not be used.

OLMAR SUPPLY INC— Type SCR

B. Studs — Steel studs to be min 3-5/8 1/2 in. (89 mm) wide. Studs cut 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs and gypsum board must have a min 1/4 in. (6 mm) engagement onto the flanges of the ceiling runner at the furthest point of extension of the joint. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner (Item 2A) with sheet metal screws located 1/2 in. (13 mm) below bottom of deflection channel. When deflection channel is not used, steel studs shall not be secured to ceiling runner. Stud spacing not to exceed 24 in. (610 mm) OC.

C. Gypsum Board* — Gypsum board sheets installed to min total thickness of 5/8 in. (16 mm) and 1-1/4 in. (32 mm) on each side of wall for 1 and 2 hr fire-rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the lower surface of the floor or roof deck. The screws attaching the gypsum board to studs at the top of the wall shall be located 1 in. (25 mm) below the bottom of the edge of the ceiling runner.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. Joint System — Max separation between bottom of steel deck or concrete floor and top of wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 25 percent compression from its' installed width. The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 3A), as follows:

Joint Configuration A

A. Deflection Channel — (Optional, Not Shown) — Nom 3 in. (76 mm) deep by min 25 gauge galv steel channel sized to accommodate ceiling runner (Item 2A). Deflection channel installed perpendicular to direction of fluted steel deck and secured to valleys of steel deck with steel masonry anchors or welds spaced max 24 in. (610 mm) OC. When concrete slab floor assembly (Item 1B) is used, deflection channel secured to concrete floor slab with steel masonry anchors spaced max 24 in. (610 mm) OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1 in. (25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

B. Forming Material* — Min 3-1/2 in. (89 mm) or 4-7/8 in. (124 mm) depth of 4 pcf (64 kg/m³) mineral wool batt insulation, for 1 and 2 hr rated wall assemblies, respectively, cut to the shape of the fluted deck, approx 20 percent larger than the area of the flutes and compressed into the flutes of the steel floor unit or roof deck flutes above the ceiling channel. For 2 hr assembly, an additional 2 in. (51 mm) thick by 1 in. (25 mm) wide sections of mineral wool batt insulation compressed 50

percent in thickness and installed cut edge first to fill the 1 in. (25 mm) gap between the top of gypsum board and bottom of the steel floor units or roof deck. The forming material shall be recessed 5/8 in. (16 mm) from each side of the wall.
INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

JOHNS MANVILLE — Safing

ROCK WOOL MANUFACTURING CO — Delta Safing Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROCKWOOL — SAFE

THERMAFIBER INC — SAF

B1. Forming Material* - Plugs — (Not Shown) —As an alternate to the forming material and spray-applied fire resistive material (Items 3B and 3B1), mineral wool plugs preformed to the shape of the fluted floor units, may be used within the flutes. Plugs shall be friction fit to completely fill the flutes above the ceiling channel. The plugs shall project beyond each side of the ceiling runner, flush with wall surfaces. Additional forming material, described in Item 3B, to be used in conjunction with the plugs to fill the gap between the top of gypsum board and bottom of steel floor units or roof deck.
ROCK WOOL MANUFACTURING CO — Delta Deck Plugs

C. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material installed on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck flush with each surface of wall.

RECTORSEAL — FS 900+ Elastomeric Sealant, [Metacaulk MC 150+](#), or Biostop [BF150+](#).

Joint Configuration B

A. Deflection Channel — (Optional, Not Shown) - Nom 3 in. (76 mm) deep by min 25 ga steel U-shaped channel centered on valleys of steel floor units or roof deck. Deflection channel secured with steel fasteners or by welds spaced max 24 in. (610 mm) OC. Deflection channel installed perpendicular to direction of fluted steel deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When floor assembly (Item 1B) is used, deflection channel secured to concrete floor slab with steel fasteners spaced max 24 in. (610 mm) OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1 in. (25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) thickness of fill material installed on each side of the wall between the top of the wall and bottom of floor unit or roof deck, flush with both sides of the wall.

RECTORSEAL — FS 900+ Elastomeric Sealant, [Metacaulk MC 150+](#), or Biostop [BF150+](#).

Joint Configuration C

A. Deflection Channel — (Optional, Not Shown) — Nom 3 in. (76 mm) deep by min 25 gauge steel U-shaped channel. Deflection channel secured to concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. Deflection channel secured to concrete floor with steel fasteners spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1 in. (25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. Packing Material — For optional use in 2 hr fire rated assemblies. Foam backer rod friction fitted into joint opening and recessed to accommodate the required thickness of fill material.

C. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) thickness of fill material installed on each side of the wall between the top of the wall and bottom of floor, flush with each surface of wall. The use of bond breaker tape is dependent upon the type of fill material used within the joint system. If 900+ Sealant is used within the joint system, bond breaker tape is not required. If 1900 Sealant is used within the joint system, bond breaker tape shall be applied to the ceiling runner (Item

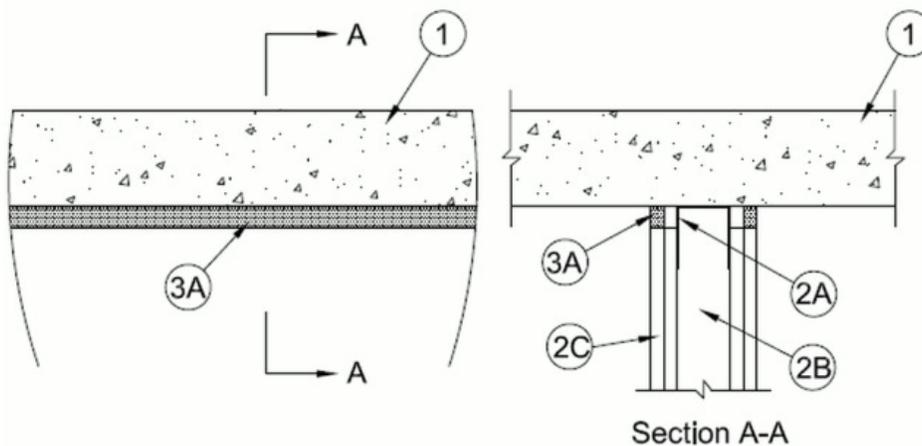
2A) or deflection channel (Item 3A) prior to the installation of fill material on both sides of the wall in 1 hr fire rated wall assemblies and in 2 hr fire rated wall assemblies where optional backer rod is not used.

RECTORSEAL — FS 900+ Elastomeric Sealant, FS 1900 Sealant, [Metacaulk MC 150+](#), or Biostop BF [150+](#).

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 3/4 In.	FT Ratings — 1 and 2 Hr (See Item 2)
Class II and III Movement Capabilities — 20% Compression or Extension or 33% Compression Only (See Item 3)	FH Ratings — 1 and 2 Hr (See Item 2)
	FTH Ratings — 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 3/4 In.
	Class II and III Movement Capabilities — 20% Compression or Extension or 33% Compression Only (See Item 3)



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete or any UL Classified **Concrete Blocks***. See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with min 1-1/4 in. (32 mm) flanges. Ceiling runner shall be secured to floor with steel fasteners spaced max 24 in. (610 mm) OC.

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner. Studs secured only to floor runner with sheet metal screw. Stud spacing not to exceed 24 in. (610 mm) OC.

C. Gypsum Board* — Gypsum board sheets installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall, for 1 and 2 hr rated wall assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 3/4 in. (19 mm) gap shall be maintained between the top of the gypsum board and the bottom of the floor and the top row of screws shall be installed into the studs 2 in. (51 mm) below the lower surface the floor.

The hourly assembly ratings of the joint system are equal to the fire rating of the wall.

3. Joint System — Max separation between bottom of floor and top of wall at time of installation of joint system is 3/4 in. (19 mm). The joint system is designed to accommodate a max 20 percent compression or extension from its installed width or max 33 percent compression only from its installed width. The joint system consists of a fill material, as follows:

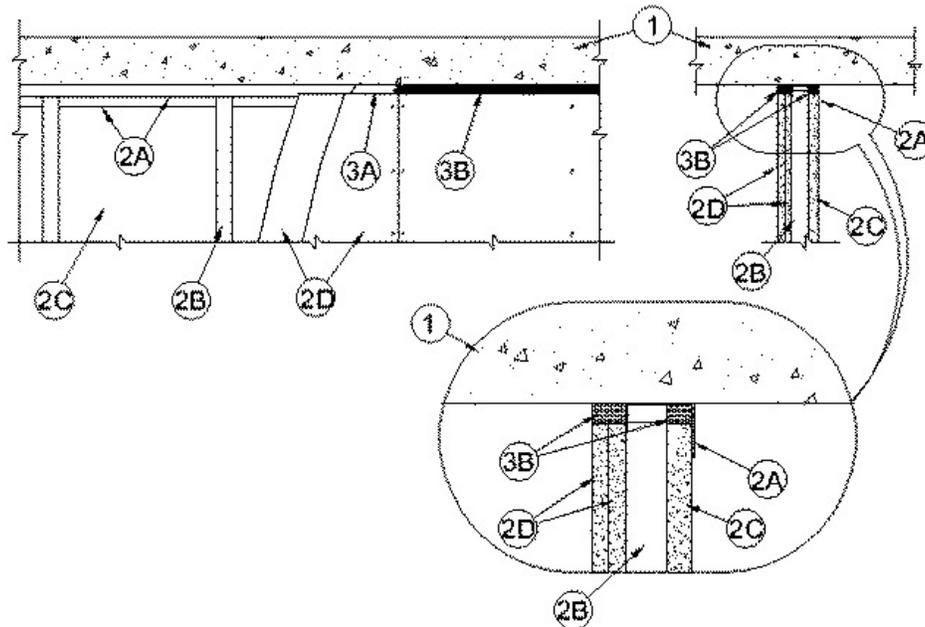
A. Fill, Void or Cavity Material* - Caulk — Min 5/8 in. (16 mm) thickness of fill material applied within the joint, flush with both surfaces of wall.

RECTORSEAL — [MC 150+](#), [Metacaulk 1200 Caulk](#)

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ANSI/UL2079	CAN/ULC S115
Assembly Rating — 1 and 2 Hr (See Item 2)	F Rating — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 In.	FT Rating — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 25% Compression or Extension	FH Rating — 1 and 2 Hr (See Item 2)
	FTH Rating — 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 25 mm
	Class II or III Movement Capabilities — 25 % Compression or Extension



1. Floor Assembly — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.

2. Shaft Wall Assembly — The 1 or 2 hr fire rated shaft wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. Floor and Ceiling Runners — "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of min 1 in. (25 mm) and min 2 in. (51 mm), fabricated from min 24 MSG galv steel. The length of the shorter leg of the "J"-shaped runner used for the ceiling runner shall be min 1/4 in. (6 mm) greater than the joint width. Runners positioned with shorter leg toward finished side of wall. Runners attached to floor and ceiling with steel fasteners spaced max 24 in. (610 mm) OC. As an alternate to the "J"-shaped runner, a min 2-1/2 in. (64 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used for the floor runner.

A1. Light Gauge Framing* — Slotted Ceiling Track — (Not Shown) - As an alternate to the "J"-shaped runner in Item 2A, a ceiling track consisting of galv steel channel with slotted flanges may be used. Slotted ceiling track sized to accommodate steel "C-T", "I" or "C-H" studs (Item 2C). Attached to concrete at ceiling with steel fasteners spaced max 24 in. (610 mm) OC.

BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS — SLP-TRK

A2. Light Gauge Framing Members* — (Not Shown) - As an option, the steel studs (Item 3B) may incorporate vertical deflection clips for attachment to the ceiling runner (Item 3A) in accordance with the manufacturer's instructions.

THE STEEL NETWORK INC — VertiClip SLD 250, VertiClip SLD 400

B. Steel Studs — "C-T", "I" or "C-H"-shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 24 MSG galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in "J"-shaped runner or slotted ceiling track. Studs spaced max 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 2D), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws. If slotted ceiling track (Item 2A1) is used, studs secured to flange of slotted ceiling track on finished side of wall only with No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping wafer head steel screws at slot midheight.

C. Gypsum Board* — 1 in. (25 mm) thick by max 24 in. (610 mm) wide gypsum board liner panels. Panels cut max 1 in. (25 mm) less in length than floor to ceiling height. Vertical edges inserted into "T"-shaped section of "C-T" studs, into holding tabs of "I" studs or into "H"-shaped section of "C-H" studs.

D. Gypsum Board* — Gypsum board sheets, 1/2 or 5/8 in. (13 or 16 mm) thick, applied on finished side of wall as specified in the individual Wall and Partition Design. A max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor. The screws attaching the gypsum board layer(s) to the "C-T", "I" or "C-H" studs shall be located 1 in. (25 mm) below the bottom of the "J"-shaped runner (Item 2A) or slotted ceiling track (Item 2A1). No gypsum board attachment screws are to penetrate the ceiling runner.

3. Joint System — Max separation between bottom of floor and top of liner panel (Item 2C) and between bottom of floor and top of gypsum board (Item 2D) at time of installation of joint system is 1 in. (25 mm). The joint system is designed to accommodate a maximum 25 percent compression from its installed width. The joint system consists of bond breaker tape and sealant, as follows:

A. Bond Breaker Tape — Polyethylene tape supplied in rolls. Tape applied to flanges of "J"-shaped runner (Item 2A) or slotted ceiling track (Item 2A1) to prevent bonding of the sealant at points other than the top and bottom of the linear gap. When FS 900+ is used, bond breaker tape is not required.

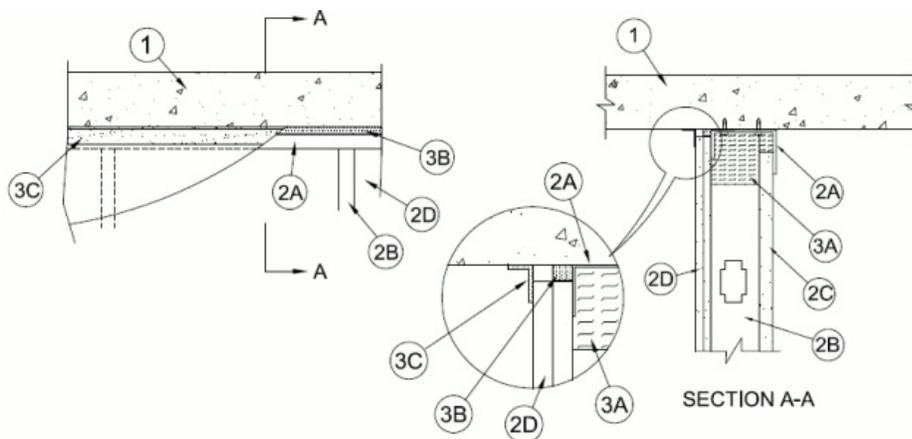
B. Fill, Void or Cavity Material* — Sealant — Min 1 in. (25 mm) depth of sealant to be installed to fill linear gap between top of gypsum board liner panel (Item 2C) and top inside surface of "J"-shaped ceiling runner or slotted ceiling track prior to installation of gypsum board sheets on finished side of wall. The depth of sealant to be installed to fill the linear gap between the top of the gypsum board sheets (Item 2D) and the bottom of the concrete floor shall be equal to the overall thickness of the gypsum board sheets and shall be flush with the finished side of the wall.

RECTORSEAL — FlameSafe FS900+, FS1900, [Metacaulk 1000](#), [Metacaulk 350i](#), [Metacaulk 1200](#), Biostop 350i, Biostop 500+ or Biostop 750

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 3/4 In.	FT Ratings — 1 and 2 Hr (See Item 2)
Class II and III Movement Capabilities — 33% Compression and Extension	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating at Ambient — Less than 1 CFM/Lin Ft	FTH Ratings — 1 and 2 Hr (See Item 2)
L Rating at 400°F — Less than 1 CFM/Lin Ft	Nominal Joint Width - 19 mm
	Class II and III Movement Capabilities — 33% Compression and Extension
	L Rating at Ambient — Less than 1.55 L/s/m
	L Rating at 204 C— Less than 1.55 L/s/m



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.

2. Shaft 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 U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Floor and Ceiling Runners — "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of min 2 in. (51 mm) and min 3 in. (76 mm), fabricated from min 20 MSG galv steel. Ceiling runner to be attached to floor with two steel concrete anchors spaced a max 24 in. (610 mm) OC. As an alternate to the "J"-shaped runner, a min 2-1/2 in. (64 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 25 MSG galv steel may be used for the floor runner.

A1. Light Gauge Framing* — Slotted Ceiling Track — (Not Shown) - As an alternate to the Item 2A, a ceiling track consisting of galv steel channel with slotted flanges may be used. Slotted ceiling track sized to accommodate steel studs (Item 2B). Legs are to be min 3 in. (76 mm) long. Attached to floor as specified in item 2A. See **Light Gauge Framing** (XHLI) Category for names of Classified Companies.

B. Studs — "C-T", "I", or "C-H" shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 25 ga galv steel. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in floor runner. Studs spaced max 24 in. (610 mm) OC.

C. Gypsum Board* — 1 in. (25 mm) thick by max 24 in. (610 mm) wide gypsum board liner panels. Panels cut max 3/8 in. (9.5 mm) less in length than floor to ceiling height. Vertical edges inserted into "T" shaped section of "C-T" studs, into holding tabs of "I" studs or into "H"-shaped section of "C-H" studs.

D. Gypsum Board* — Gypsum board 5/8 in. (16 mm) thick, applied on finished side of wall as specified in the individual Wall and Partition Design. The boards are cut max 3/4 in. (19 mm) less in length than the floor to ceiling height. The screws attaching the gypsum board layer(s) to the "C-T", "I", or "C-H" studs shall be located max 3 in. (76 mm) below the steel deck. No gypsum board attachment screws shall be driven into the ceiling runner.

The hourly fire rating and the F, FT, FH and FTH ratings of the joint system are equal to the hourly fire rating of the wall.

3. Joint System — Max separation between bottom of floor and top of wall is 3/4 in. (19 mm) at the time of installation. The joint system is designed to accommodate a max 33 percent compression and extension from its installed width. The joint system consists of the following:

A. Forming Material* — Min 4 pcf (64 kg/m³) mineral wool insulation. Min 1 in. (25 mm) wide pieces of forming material to be cut to a thickness 50% greater than the gap above the shaft liner board, compressed and installed within the ceiling runner above the shaft liner board. In addition, min 3 in. thickness of forming material cut to a width 20% larger than the width of the ceiling runner, compressed in width and installed into the top of ceiling runner between leg of track and gypsum liner board.

B. Fill, Void or Cavity Material* — Nom 1-1/2 in. (38 mm) high by 5/8 in. (16 mm) thick foam with integral 1.5 mm by 5/8 in. (16 mm) wide intumescent strip adhered to bottom surface. **Blaze Foam** to be compressed and inserted into joint between concrete floor and gypsum board, against ceiling runner, with the intumescent strip positioned at bottom and resting on the cut edge of the gypsum board. **Blaze Foam** is supplied in varying lengths and shall be cut to length and friction fit within the joint with ends tightly butted. Butt joints in the BlazeFoam shall be spaced min 40 in. (102 mm) apart. **Blaze Foam** applied within joint opening on finished side of wall.

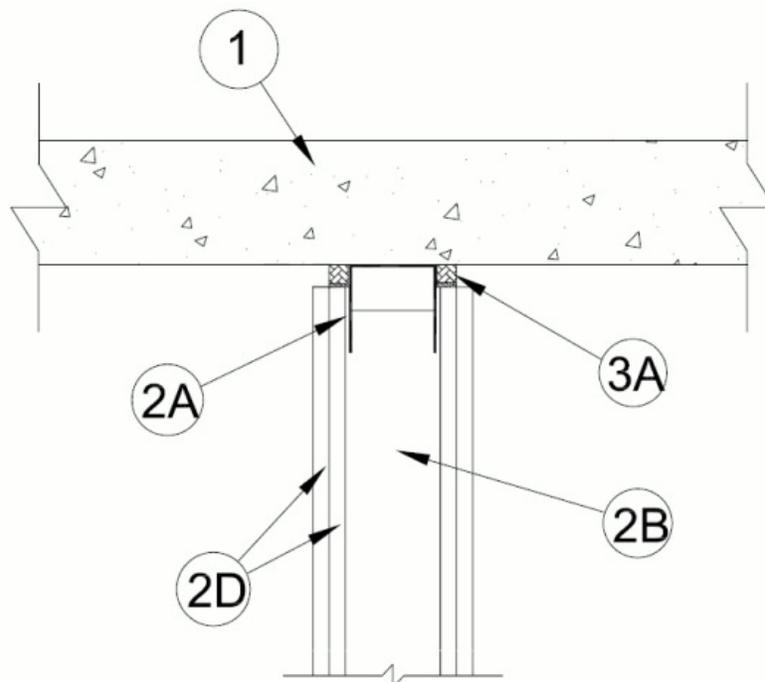
RECTORSEAL — **Blaze Foam**

C. Tape and Joint Compound — A layer of tape and joint compound shall be applied over the joint at the finished side of wall. The tape shall lap onto the gypsum wall and concrete floor, along the length of the joint.

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1/2 and 3/4 In. (See Item 3)	FT Ratings — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 66% or 50% Compression and 25% or 33% Extension (See Item 3)	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/Lin ft	FTH Ratings — 1 and 2 Hr (See Item 2)
L Rating At 400 F — Less Than 1 CFM/Lin ft	Nominal Joint Width - 13 and 19 mm (See Item 3)
	Class II or III Movement Capabilities — 66% or 50% Compression and 33% or 25% Extension (See Item 3)
	L Rating At Ambient — Less Than 1.55 L/s/m
	L Rating At 204 C — Less Than 1.55 L/s/m



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick steel reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.

The hourly fire rating of the floor assembly shall be equal or greater than the hourly fire rating of the wall assembly.

2. 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 U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of min 20 ga galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2-1/2 in. (64 mm) flanges. Ceiling runner secured to floor with steel concrete anchors spaced max 24 in. (610 mm) OC. As an alternate, the floor runner may be formed from min 25 MSG galv steel and have min 1 or 1-1/4 in. (25 or 32 mm) flanges.

A1. Light Gauge Framing* — Slotted Ceiling Runner - As an alternative to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner to be provided with minimum 2-1/2 in. (64 mm) flanges. Slotted ceiling runner secured to floor with steel concrete anchors spaced max 12 in. (305 mm) OC.

See **Light Gauge Framing** (XHLI) Category for names of Classified Companies.

B. Batts and Blankets* (Not Shown) — Faced or unfaced glass fiber insulation or mineral wool insulation completely filling stud cavity. Insulation shall meet the specifications described in the individual Wall and Partition Design.

See **Batts and Blankets** (BZJZ) Category for names of Classified Companies.

C. **Studs** — Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.

D. **Gypsum Board*** — Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1 1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory except that a max 1/2 in. (13 mm) gap shall be maintained between the top of the gypsum board and the bottom of the floor assembly. The screws attaching the gypsum board to the studs along the top of the wall shall be located max 3-1/2 in. (89 mm) below the bottom of the floor. No gypsum board attachment screws shall be driven into the ceiling runner.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. Joint System — Max separation between bottom of floor and top of gypsum board (at time of installation) is 1/2 in. (13 mm) at the time of installation. The joint system is designed to accommodate a max 50 percent compression or max 25 percent extension from its installed width. As an alternate, when Item 3B is used, the max separation between bottom of floor and top of gypsum board at time of installation is 3/4 in. (19 mm) and the movement capabilities are max 66% compression and 33% extension. The joint system shall consist of the following:

A. **Fill, Void or Cavity Material*** — **Blaze Foam** consists of nom 1-1/2 in. (38 mm) high by 5/8 in. (16 mm) thick foam with integral 1.5 mm by 5/8 in. (16 mm) wide intumescent strip adhered to bottom surface. One strip of **Blaze Foam** to be compressed and inserted into joint against the ceiling runner, between bottom of floor and top edge of gypsum board, with the intumescent strip positioned at bottom and resting on the cut edge of the gypsum board. **Blaze Foam** is supplied in varying lengths and shall be cut to length and friction fit within the joint with ends tightly butted. **Blaze Foam** applied within joint opening on both sides of wall.

RECTORSEAL — **Blaze Foam**

B. **Tape and Joint Compound** — (Not Shown) When nominal joint width at time of installation exceeds 1/2 in. (13 mm), a layer of tape and joint compound shall be applied over the joint flush with both sides of wall. The tape shall lap onto the gypsum wall and concrete floor, along the length of the joint.

*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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