



A CSW Industrials Company

PRODUCT DATA SHEET

METACALK® FRM FIRE RATED MORTAR For large openings

Description

Metacalk® Fire Rated Mortar is a specially formulated rapid hardening gypsum/cement compound. The product provides the optimum combination of workability, strength and fire resistance. When mixed with clean water to a suitable consistency, Metacalk® Fire Rated Mortar sets without shrinking and can form a rigid, gas tight, fire resistant seal. It can easily be cut or drilled and resealed if future penetrants are needed. No special tools are required to mix or install the product. Metacalk® Fire Rated Mortar systems are rated for up to 4 hours and has been tested in accordance with ASTM E 814 (UL 1479) and ULC-S115-95 test standards. Metacalk® Fire Rated Mortar is protected in a wet stage as well as in a dry stage against mold growth with a combination of biocides.



Applications

A fire rated load bearing mortar to economically firestop large openings for through-penetrations in fire rated walls and floors. Can be used with power cables, fiber optic telephone cables. Recommended for use with aluminum or steel cable trays, as well as EMT, copper, steel, or black iron pipe. Use Metacalk® Fire Rated Mortar for various applications:

- Wall or floor applications
- Around metallic pipes (steel, copper, iron, etc.)
- Around electrical power cables
- Around communication cables (telephone, fiber optic, etc.)
- Blank openings

Characteristics | Features

- Non-sag Adjustable consistency (pourable or trowelable)
- High yield
- Non-shrinking
- Safe and simple to use
- Workable approximately 45 minutes.

Packaging

Code	Size	Qty. per Case	Dimensions (in)	Cubic Feet
66334	45 lb bag	1	13 dia x 14	1.08

Installation Data

Mixing Procedure: Mix with clean water in a suitable container. Slowly add the dry mortar mix to water while stirring by hand, or by power mixer, to ensure a smooth lump free mix.

Recommended Mixing Ratios:

Mortar Mix: Water (by volume)

Consistency:

Pourable For Floor Openings 2 1/2 : 1

Stiff for Wall Openings 3 : 1

DO NOT USE A MIX RATIO OF LESS THAN 2:1

NOTE: The wet mix will remain usable for approximately 45-60 minutes depending on batch size, water content and temperature. Once material has been mixed to the desired temperature. Once material has been mixed to the desired consistency, DO NOT attempt to alter by adding additional water or mortar THIS WILL CAUSE THE MATERIAL TO HARDEN VERY QUICKLY. Any spillage should be wiped up with a damp cloth before setting occurs.

Thickness/Fire Rating

Refer to tested designs or manufacturer's recommendations. For additional technical information call toll free 800-231-3345.

INSTALLATION INSTRUCTIONS

WALL OPENINGS

For small holes and gaps, trowel a stiff mix into the opening to the desired depth. For larger holes, use an appropriate damming material to support the mix until it sets.

FLOOR OPENINGS

When sealing holes in floor slabs, an appropriate damming material must be installed prior to pouring in the mortar mix. Panels of damming materials should be cut to fit tightly around penetration within the opening so as to avoid leakage of the mortar mix during pouring.

NOTE: Damming materials can be made from various materials, e.g. insulation, hard foam, wood, backer rod, etc. These damming materials can be either combustible or non-combustible. Combustible damming material is usually removed after the mortar mix has set. Non-combustible damming materials can be left in place. However, the specifier or the local authority having jurisdiction may require a specific type of or the removal of a particular damming material. If damming material is to be removed, a suitable bond breaker (e.g. plastic sheeting) should be used between the mortar mix and the damming material.

Testing Data

For specific test criteria, refer to the UL Product iQ and Interek Directory of Building Products or call RectorSeal

Metacaulk FRM Fire Rated Mortar was tested at positive pressure with a minimum 0.01 (2.5 Pa) inches water and in accordance with ASTM E814 (UL 1479). Tested in accordance with CAN/ULC S115 testing standards. Tested to the time-temperature requirements of ASTM E119 (UL 263).

Suggestions and recommendations covering the use of our products are based on our past experience and laboratory findings. However, as we have no control as to the methods and conditions of application, we only assume responsibility for the uniformity of our products within manufacturing tolerances.

Material Properties

Asbestos Fillers	None
pH Values	6.5
Activation of Intumescence:	
Approximate expansion on setting	0.1%
Color	Light red
Density loose bulk	40.6 pcf (650 kg/m ³)
Density wet cast	84.3 pcf (1350 kg/m ³)
Density oven dried	54.6 pcf (875 kg/m ³)
Crushing strength, wet	700 psi (5 N/mm ²)
Adhesion to concrete	Excellent
Adhesion to Steel/ Copper	Good
Adhesion to Cables	Good
Freeze/Thaw	Excellent
Workable Pot Life	Approximately 45 minutes
set hard	3-4 hours
Fully cured	28 days
Volume Coverage:	
Yield	2:1 mix ratio 1500 cubic inches per 45 lb bag 3:1 mix ration 1350 cubic inches per 45 lb bag
45 lbs	2-1/2:1 500 cu in 3:1 1350 cu in

Inspection & Repair

RectorSeal recommends firestop system inspection is 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.

Storage & Handling

Metacaulk FRM Fire Rated Mortar should be stored between 35°F (2°C) and 120° F (49° C) to obtain a 2 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

Metacaulk FRM Fire Rated Mortar is not designed to be used in areas under continuous immersion or in areas which would be continuously wet. The mortar should not be used in areas which would experience high or severe vibration or movement.

Cautions

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

CONTAINS: Gypsum Plaster and Perlite aggregate. **PRECAUTIONS:** Do not take internally. May cause eye, skin, and respiratory tract irritation. Wear gloves and safety glasses. Wash after handling. **FIRST AID:** For any overexposure or if skin irritation develops get immediate medical attention after first aid is given. **EYES:** Flush for 15 minutes with clean water. Seek immediate medical attention. **SKIN:** Wash with soap and water. Do not use solvents to remove from skin. **INHALATION:** Remove to fresh air. **INGESTION:** DO NOT INDUCE VOMITING. **SPILLS:** Clean up immediately with scrapers and water. **STORAGE AND HANDLING:** Keep container upright and tightly closed. Do not reuse container. **KEEP OUT OF REACH OF CHILDREN.**

Health and Safety

Non-toxic and asbestos free. Take normal precautions to avoid inhalation, or ingestion, and to ensure adequate ventilation when mixing. In the event of eye or mouth contact, wash immediately with plenty of clean water. Refer to Safety Data Sheet for additional information.

For additional information, refer to Safety Data Sheet.

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**

A CSW Industrials Company. RectorSeal, the logos and other trademarks are property of RectorSeal, LLC, its affiliates or its licensor's and are protected by copyright, trademark and other intellectual property laws, and may not be used without permission. RectorSeal reserves the right to change specifications without prior notice. ©2018 RectorSeal. All rights reserved. R50101-0919