

PRODUCT DATA SHEET

April 2016

BIO™ K-10+ Fire Rated Mortar

Classified System Numbers

For list of systems see www.biofireshield.com



1. Product Description

BIO™ K-10+ 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, Bio™K-10+ 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. Bio™ K-10+ Fire Rated Mortar systems are rated for up to 4 hours and have been tested in accordance with ASTM E 814 (UL 1479) and ULC-S115-95 test standards. BIO™ K-10+ is protected in a wet stage as well as in a dry stage against mold growth with a combination of biocides.

Use Bio™ K-10+ 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
Concrete or concrete block (CMU) walls
Concrete floors
Cable Trays (aluminum or steel)

Bio™ K-10+ Fire Rated Mortar Features

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

2. Material Properties

Color	Light Red
Approximate expansion on setting	0.1%
Density loose bulk	40.6 pcf (650 kg/m3)
Density wet cast	84.3 pcf (1350 kg/m3)
Density oven dried	54.6 pcf (875 kg/m3)
Crushing strength, wet	700 psi (5 N/mm2)
Asbestos fillers	None
pH Values	6.5
Adhesion to concrete	Excellent
Adhesion to Steel/Copper	Good
Adhesion to Cables	Good
Freeze-Thaw Resistance	Excellent
Workable Pot Life	Approximately 45 minutes
Sets hard	3 - 4 hours
Fully Cured	28 days
Yield	2:1 mix ratio 1500 cubic inches per 45 lb bag 3:1 mix ratio 1350 cubic inches per 45 lb bag

3. 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.

4. 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 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.

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 Material Safety Data Sheet for additional information.

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.**

INSTALLATION INSTRUCTIONS**WALL OPENINGS**

For small holes and gaps, trowel a stiff mix into the opening to the recommended 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.

5. Testing Data

Bio™ K-10+ Fire Rated Mortar has been classified and listed by Underwriters Laboratories and tested at a positive pressure with a minimum .01 inches (2.5 Pa) of water and in accordance with ASTM E 814, UL 1479 and ULC-S115-95.

6. Storage & Handling

Must be stored in dry conditions under protective cover in its original container. Minimum shelf life of two years when stored inside, in a conditioned area and in the original unopened containers.

7. Availability

45 pound (20.4 kg) bags
20 pound (9.1 kg) pails

8. Limitations

Bio™ K-10+ 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 vibration or movement.

9. Cautions

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

For additional information, refer to Material Safety Data Sheet.

**For additional technical service,
call: 713-263-8001 or 1-800-231-3345
fax: 713-263-7577 or 1-800-452-2824**

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10. LIMITED WARRANTY

RectorSeal 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. 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 shall not be liable for incidental or consequential damages.

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.