



WEAVER GENERAL CONSTRUCTION COMPANY
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 Englewood, CO 80110
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SUBMITTAL TRANSMITTAL

June 30, 2011

WGC Submittal No: 09251-001

PROJECT: **Harold Thompson Regional WRF**
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: **GMS, Inc.**
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
 Sewage Disposal District**
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: **Tri City Drywall, Inc.**
 3720 E Saint Vrain St.
 Colorado Springs, CO 80909
 719-596-0095 Frank Hoover

SUBJECT: HardieBoard® 500 Board and FireBloc® Type X Gypsum Wallboard

SPEC SECTION: 09251 - Gypsum Wallboard

PREVIOUS SUBMISSION DATES: None

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

Contractor's Stamp:

Engineer's Stamp:

Date: 6/30/11
 Reviewed by: H.C. Myers
 (X) Reviewed Without Comments
 () Reviewed With Comments

**ENGINEER'S
 COMMENTS:** _____



Products / Interior / HardieBacker® 500 Board

HardieBacker® 500 Cement Board for walls and floors delivers superior protection against moisture damage and mold growth. It contains no paper facing, which serves as a food source for mold, or gypsum, which can disintegrate with continuous moisture exposure. HardieBacker board is an ideal choice for wet area walls; its smooth surface may be painted, textured, wallpapered, or tiled. HardieBacker® 500 board is available in a 3' x 5' and 4' x 8' sheet size and is backed by a limited lifetime product warranty.

PRODUCT INFORMATION

HardieBacker® Cement Board with Moldblock™ Technology Product Specifications

Basic Composition/Size

90% Portland cement and ground sand. HardieBacker® board contains no asbestos, glass mesh, formaldehyde, or gypsum.

- Sheet Size:
- 3' x 5'
- 4' x 8'
- Thickness: 0.42"
- Weight: 2.6 lbs/sq.ft.

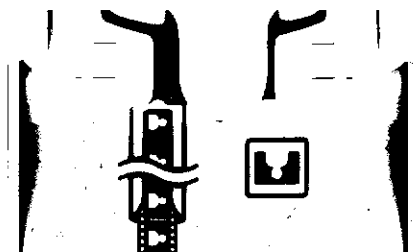
Mold Resistance

HardieBacker products achieve a perfect score on both industry standard mold tests. HardieBacker board scores a 0 (best possible score) on the ASTM G21 for mold resistance and a 10 (best possible score) on the ASTM D3273 test against mold growth.

Approvals

HardieBacker® cement board is recognized as an interior substrate according to the following:

- National Evaluation Service (NES), Inc., Report No. NER-405 (BOCA, ICBO, SBCCI)
- City of Los Angeles, Research Report No. 24862



- City of New York MEA number 223-93M
- HUD Materials Releases 1263d and 1268c
- Tile Council of North America handbook

Flexural Strength

Based on typical Equilibrium Moisture Content: 2100 psi when tested in accordance with ASTM test method C1185.

Non-Combustibility

HardieBacker® cement board is recognized for use in non-combustible construction in NER-405.

Surface Burning Characteristics

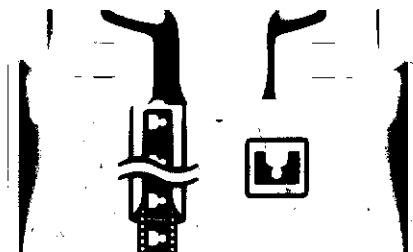
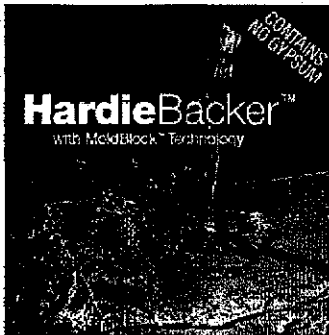
When tested in accordance with ASTM test method E-84:

Flame Spread 0
Fuel Contributed 0
Smoke Developed 5

Thermal Resistance

(Approximate value) 1/4" thick: R:0.13

www.tileusa.com





10901 Elm Avenue, Fontana, CA 92337

HardieBacker™

Cement Board with MoldBlock™ technology

Limited Lifetime Product Warranty

1. LIMITED WARRANTY: James Hardie Building Products, Inc. ("Hardie") warrants, (for installation within the U.S. and Puerto Rico) to the purchaser, the first owner of the structure to which the product is applied, and the first transferee of such structure (each a "Covered Person") that HARDIEBACKER™ Cement Board with MoldBlock™ technology (hereinafter "Product") is free from defects in materials and workmanship during the life of the Product subject to the terms and conditions of this Limited Warranty.

2. WHAT WE WILL DO: If during the warranty period any Product proves to be defective, Hardie, in its sole discretion, shall replace or refund the original purchase price of the defective Product. If the original retail cost cannot be established by the Covered Person, the cost shall be determined by Hardie in its sole and reasonable discretion. Hardie's replacement of the defective Product pursuant to Section 2 of this Limited Warranty SHALL BE THE SOLE EXCLUSIVE REMEDY available to a Covered Person with respect to any defect. Hardie will pay for or reimburse labor costs.

3. WHAT YOU MUST DO/CONDITIONS OF LIMITED WARRANTY: Warranty coverage under this Limited Warranty shall be subject to the following terms and conditions.

- A. A Covered Person must provide written notice to Hardie within thirty (30) days after discovery of any claimed defect covered by this Limited Warranty and before beginning any permanent repair. The notice must describe the location and details of the claimed defect and any additional information necessary for Hardie to investigate the claim. Photos of the Product, showing the claimed defect must accompany the notice. A claimant under this Limited Warranty must provide proof to Hardie that such claimant is a Covered Person as defined in Section 1 above.
- B. The Product must be installed according to Hardie's printed installation instructions and all building codes adopted by federal, state or local governments or government agencies and applicable to the installation.
- C. Upon discovery of a claimed defect, a Covered Person must immediately, and at a Covered Person's own expense, provide for protection of all property that could be affected until the claimed defect is remedied if applicable. Before any permanent repair to the Product, a Covered Person must allow Hardie or Hardie's authorized agent to enter the property and structure where the Product is installed, if applicable, and examine, photograph and take samples of the Product.

4. WHAT IS NOT COVERED: This Limited Warranty does not cover damage or defects resulting from or in any way attributable to:

- A. The improper storage, shipping, handling or installation of the Product (including, without limitation, failure of the Product to be installed in strict compliance with the Conditions of Limited Warranty set forth in Section 3.B of this Limited Warranty) and/or improper installation of studs or other accessories;

- B. Further processing, modification or alteration of the Product after shipping from Hardie;
- C. Neglect, abuse, or misuse;
- D. Repair or alteration;
- E. Settlement or structural movement and/or movement of materials to which the Product is attached;
- F. Damage from incorrect design of the structure;
- G. Exceeding the maximum floor deflection;
- H. Exceeding the maximum designed wind loads;
- I. Acts of God including, but not limited to, tornados, hurricanes, floods, earthquakes, severe weather or other natural phenomena, (including, but not limited to, unusual climate conditions);
- J. Efflorescence or performance of any paints and/or coatings which are not Hardie and/or Hardie affiliated applied;
- K. Lack of proper maintenance; or
- L. Any cause other than material or manufacturing defects attributable to Hardie

5. LIMITATION OF LIABILITY:

IN NO EVENT SHALL HARDIE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO, ANY CLAIMS OF PROPERTY DAMAGE, BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, TORT, OR ANY OTHER LEGAL THEORY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

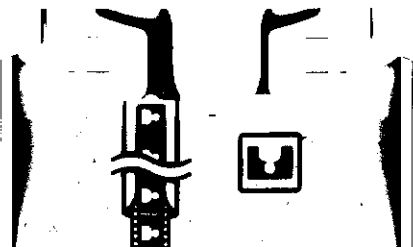
6. ENTIRE AGREEMENT: This Limited Warranty contains and represents the only warranty extended by Hardie for the Product. No employee or agent of Hardie or any other party is authorized to make any other warranty in addition to those made in this Limited Warranty. This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

7. HOW TO OBTAIN WARRANTY SERVICE: For warranty services call 1.866.375.8603 or write Warranty Department, James Hardie Building Products, Inc., 10901 Elm Avenue, Fontana, California 92337.



1-800-9-HARDIE

JH96514BL 7/07





American Gypsum
3811 Turtle Creek Blvd., #1200
Dallas, TX 75219
214-530-5500
www.americangypsum.com

Technical Information
1-800-545-6302 ext. 5607

FireBloc® Type X Gypsum Wallboard

FIREBLOC TYPE X™

AMERICAN GYPSUM

5/8" x 4' x 12'

5/8" x 4' x 12'

AMERICAN GYPSUM

Panel tipo X para interiores

DESCRIPTION

FireBloc® Type X gypsum wallboard is the preferred product in the industry due to its consistently high quality standards. The core has been reinforced with the addition of fibers, increasing its strength and providing fire resistance ratings when used in tested assemblies. The fire-resistant gypsum core is encased in 100% recycled natural-finish paper on the face side and sturdy liner paper on the back side. The face paper is folded around the long edges to reinforce and protect the core, with the ends being square-cut and finished smooth. Long edges of the panels are tapered, allowing joints to be reinforced and concealed with a joint compound system.

FireBloc Type X wallboard is 5/8" thick, and comes in a variety of lengths for standard construction uses. American Gypsum products contain no asbestos and no detectable levels of formaldehyde.

BASIC USES

FireBloc Type X wallboard is used as a covering material for interior walls and ceilings in residential and commercial applications that often require specific fire rated assemblies. It is designed for direct attachment by screws, nails or adhesive to wood or metal framing and even existing surfaces.

With joints covered, FireBloc Type X gypsum wallboard will resist the passage of smoke. For additional information on smoke barriers, refer to Gypsum Association publication, "Building and Inspecting Smoke Barriers" (GA-618).

LIMITATIONS

FireBloc Type X gypsum wallboard is intended for interior applications only.

Avoid exposure to temperatures exceeding 125°F (52°C), e.g., located adjacent to wood burning stoves and or heating appliances.

Avoid exposure to excessive or continuous moisture before, during and after installation, e.g., swimming pools, saunas or steam rooms. Eliminate any sources of moisture immediately.

FireBloc Type X gypsum wallboard is a nonstructural product and should not be used as a nailing base.

Spacing of wall and ceiling framing should not exceed 24" o/c.

MAXIMUM SPACING OF FRAMING (WOOD OR METAL)			
	Single Ply Thickness	Application	Maximum Framing O/C Spacing
Ceilings	5/8"	Parallel to Framing	16" o/c
	5/8"	Perpendicular to Framing	24" o/c
Walls	5/8"	Parallel to Framing	24" o/c
	5/8"	Perpendicular to Framing	24" o/c

To prevent noticeable sag in ceilings, the weight of overlaid unsupported insulation should not exceed the following recommendations:

FRAMING	PRODUCT	PSF (LBS. PER S/F) OF INSULATION
24" o/c	5/8" FireBloc Type X	2.2 (10.7 kg/M²)

Insulation blankets or batts should be recessed, with flanges attached or friction fitted to the sides of the studs or joists.

STORAGE AND HANDLING

Gypsum board does not generate or support the growth of mold when it is properly transported, stored, handled, installed, and maintained. However, mold spores are present everywhere and when conditions are favorable; mold can grow on practically any surface. GYPSUM BOARD MUST BE KEPT DRY to prevent the growth of mold.

Gypsum board must be stored in an area that protects it from adverse weather conditions, condensation, and other forms of moisture. Job site conditions that can expose gypsum board to water or moisture must be avoided.

Gypsum board must be protected during transit with a weather-tight cover in good condition. Plastic shipping bags are intended to provide protection during transit only and must be promptly removed upon arrival of the load. Failure to remove the shipping bag can increase the likelihood of developing conditions favorable to the growth of mold.

Gypsum board that has visible mold growth must not be used. For additional information refer to Gypsum Association publication, "Guidelines for the Prevention of Mold Growth on Gypsum Wallboard" (GA-238).

Gypsum board must be stored off the ground and under protective cover. Sufficient risers must be used to assure support for the entire length of the wallboard to prevent sagging.



STORAGE & HANDLING

Gypsum board must be delivered to the job site as near to the time it will be used as possible. Individuals delivering gypsum board to jobsites should ensure that it is carried, not dragged, to place of storage/installation to prevent damage to finished edges.

Gypsum board shall always be stacked flat - NEVER on edge or end. Gypsum board stacked on edge or end is unstable and presents a serious hazard should it accidentally topple. Gypsum board should be placed so weight is evenly distributed and the floor is not overloaded.

GOOD BUILDING PRACTICES

Installation - The building temperature shall be maintained at not less than 50°F (10°C) for adhesive application of gypsum board, during joint treatment, texturing, and decoration. When a temporary heat source is used the temperature shall not be more than 95°F (35°C) in any given room or area. Adequate and continuous ventilation shall be provided in the working area during the installation and the drying or curing period.

The design professional has the ultimate responsibility for location of control joints.

Decoration - The design professional, contractor and or owner shall review Gypsum Association's bulletin, "Recommended Levels of Gypsum Board Finish" (GA-214), in order to specify the proper level of drywall finishing needed to assure the desired results.

For best painting results, all surfaces, including joint compound, should be clean, dust-free and not glossy. To equalize the porosities between the face paper and joint compound and improve fastener and joint concealment, the surface shall be primed and sealed with a full-bodied drywall primer before texturing or final decoration. The selection of the proper paint to give the specified or desired finished characteristics is the responsibility of the design professional, contractor and or owner.

Gypsum board that is to have a wall covering applied to it should be prepared and primed as described for painting.

APPLICABLE STANDARDS

Manufacturing	ASTM C 1396 section 5 (C 36) Federal Specification SS-L-30D Type III, Grade X
Installation	ASTM C 840 Gypsum Association GA-216 Gypsum Association GA-214
Surface Burning Characteristics	ASTM E 84 Flame Spread 15 Smoke Developed 0

PRODUCT DATA

SIZES

Thickness	Widths	Lengths	Edge Type	UL Type
5/8" (15.9mm)	4' (1219mm)	8' - 14' (2438mm - 4267mm)	Tapered	AGX-1, AGX-11
5/8" (15.9mm)	54" (1372mm)	12' (3658mm)	Tapered	AGX-1, AGX-11

Special lengths or edges may be available on special order. Consult your American Gypsum sales representative for details.

Thermal Resistance "R" Value 5/8" = 0.48

FIRE RESISTANCE RATINGS

Fire rated assemblies are specified from tests performed by independent laboratories. These designs are made up of specific materials in a precise configuration. When choosing construction details to meet certain fire resistance requirements, care must be taken to insure that each component of the selected assembly is the one specified in the test and are assembled in accordance with the requirements of the design.

SUBMITTAL APPROVALS

Job Name: _____

Contractor: _____ Date: _____