



Weaver

CONSTRUCTION MANAGEMENT

3679 S Huron Street, Suite 404 Englewood, Colorado 80110

Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

May 14, 2012

Submittal #: 13121-004.A

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: **Lefever Building Systems**
19089 E Ithaca Dr.
Aurora, CO 80013
970-210-7424 Scott Yarmer

SUBJECT: Revisions for review comments from May 4th on the Metal Building Insulation & Facing @ the PD Building

SPEC SECTION: 13121

PREVIOUS SUBMISSION DATES: 4/25/12

DEVIATIONS FROM SPEC: ___ YES x NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver Construction Management and, unless indicated otherwise, has been found to be in conformance with the intent of the contract documents.

Contractor's Stamp:

Engineer's Stamp:

Date: 5/14/12

Reviewed by: John Jacob

(x) Reviewed Without Comments

() Reviewed With Comments

ENGINEER'S
COMMENTS:

LAMTEC®

CORPORATION

R-19 faced
FOR ROOF
& wall

WMP-VR

POLYPROPYLENE / SCRIM / KRAFT

Meets ASTM C1136, Type IV

FACING COMPOSITION	DESCRIPTION	VALUES (ENGLISH)	VALUES (METRIC)
White Film	Polypropylene	0.0015 inch	38.1 micron
Adhesive	Flame Resistant		
Reinforcing	Tri-directional Fiberglass/Polyester	5 / inch (MD) 4 / inch (XD)	20 / 100 mm (MD) 16 / 100 mm (XD)
Kraft	Natural	11 lbs / 3000 ft ²	18 g / m ²

PHYSICAL PROPERTIES	TEST METHOD	VALUES (ENGLISH)	VALUES (METRIC)
Basis Weight	Scale	17 lbs / 1000 ft ²	83 g / m ²
Permeance (WVTR)	ASTM E98 Procedure A	0.09 perm (grains/hr ft ² in Hg)	5.17 ng / N's
Bursting Strength	ASTM D774	60 psi	4.2 kg / cm ²
Puncture Resistance	ASTM C1136	125 beach units	3.7 Joules
Tensile Strength	ASTM C1136	40 lbs/inch width (MD) 30 lbs/inch width (XD)	7.0 kN / m (MD) 5.3 kN / m (XD)
Caliper / Thickness	Micrometer	0.008 inch	203 micron
Accelerated Aging	30 Days @ 95% RH, 120°F (49°C)	No Corrosion No Delamination	No Corrosion No Delamination
Low Temperature Resistance	ASTM D1790 -40°F (-40°C)	Remains Flexible No Delamination	Remains Flexible No Delamination
High Temperature Resistance	4 hours @ 240°F (116°C)	Remains Flexible No Delamination	Remains Flexible No Delamination
Water Immersion	24 hours @ 73°F (23°C)	No Delamination	No Delamination
Mold Resistance	ASTM C665 / C1338	No Growth	No Growth
Dimensional Stability	ASTM D1204	0.25%	0.25%
Light Reflectance	ASTM C523	85%	85%

FIRE TESTING	UL-723 / ASTM E84		CAN ULC-S102M		BRITISH STANDARD 476
	Flame Spread	Smoke Developed	Flame Spread	Smoke Developed	Parts 6 and 7 Summary Report
Film Exposed	10	10	15	30	Class 0 Surface
Kraft Exposed	15	5	15	45	

Physical Properties based upon statistical averages, Weight / Thickness +/- 10%

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Lamtec Corporation Bartley-Chester Road P.O. Box 37 Flanders, New Jersey 07836-0037 USA

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sustainable insulation.

Specification Sheet



Metal Building Insulation 202-96

PRODUCT DESCRIPTION

Basic Use: CertainTeed Fiber Glass Metal Building Insulation 202-96 is a flexible blanket insulation furnished in rolls and intended to be laminated on one side with a suitable vapor retarder. It is used as a thermal and acoustical insulation in the roofs and sidewalls of pre-engineered metal buildings and post frame construction.

Benefits: Metal Building Insulation 202-96 reduces transmission of exterior sound to the interior of the building and absorbs reverberating sounds within the building.



Composition and Materials: The product is composed of tan, uniformly textured, inorganic fibrous glass and formed with a formaldehyde-free binding agent.

Limitations: This product is designed for use in interior (weather protected) walls and roofs of pre-engineered metal buildings. It should be laminated on a first-in, first-out basis and should be kept dry at all times during processing and end use. After lamination, packaging should not exceed a 5.5:1 compression ratio. For additional information, please refer to the appendix of the NAIMA 202-96 (Rev. 2000) standard.

Sizes: Standard available sizes as noted in table below. Contact CertainTeed for non-standard sizes.

INSTALLATION

The vapor retarder on Metal Building Insulation 202-96 should be installed toward the conditioned spaces in the building. The insulation is normally applied over or between the structural members of the building and held in place by the covering sheets or insulation support system. When using high R-Value systems, it is recommended that the cavity between the exterior metal sheet and the faced fiber glass insulation should be completely filled.

THERMAL PERFORMANCE			
Nominal Thickness (Pre-Lamination)		R-Value	
in.	mm	R	RSI
3 3/8	86	10	1.76
3 3/4	95	11	1.94
4 3/8	111	13	2.29
5 1/4	133	16	2.82
6 3/8	162	19	3.35
6 3/4	171	21	3.70
8	203	25	4.40
9 1/4	235	30	5.30

R-19 wall - R-30 Roof (R-19 + R-10 unfaced)

AVAILABLE SIZES

R-Value	Nominal Thickness		Width		Length	
	R	in.	mm	in.	mm	ft.
10	3 3/8	76.2	36, 48, 60, 72	914, 1219, 1524, 1829	100	30.5
11	3 3/4	88.9	36, 48, 60, 72	914, 1219, 1524, 1829	100	30.5
13	4 3/8	101.6	36, 48, 60, 72	914, 1219, 1524, 1829	75	22.9
16	5 1/4	133.35	36, 48, 60, 72	914, 1219, 1524, 1829	50	15.2
19	6 3/8	127	36, 48, 60, 72	914, 1219, 1524, 1829	50	15.2
21*	6 3/4	152.4	36, 48, 60, 72	914, 1219, 1524, 1829	45	13.7
25*	8	203.2	36, 48, 60, 72	914, 1219, 1524, 1829	30	9.1
30*	9 1/4	235.2	36, 48, 60, 72	914, 1219, 1524, 1829	25	7.6

Non-standard widths are available and subject to an upcharge on an individual basis determined by manufacturer's capability, quantity, lead times and packaging availability. *R-21, R-25 and R-30 are made to order.

Product Name CertainTeed Metal Building Insulation 202-96
Manufacturer CertainTeed Corporation
Address P.O. Box 860
Valley Forge, PA 19482-0105
Phone 610-341-7000 • 800-233-8990
Fax 610-341-7571
Website www.certainteed.com/insulation

TECHNICAL DATA

Applicable Standards

- Model Building Codes:
 - ICC
- Material Standards:
 - ASTM C991, Type I
 - NAIMA 202-96 (Rev. 2000)

Fire Resistance

- Fire Hazard Classification:
 - UL 723, ASTM E84, NFPA 255
 - Max. Flame Spread Index: 25
 - Max. Smoke Developed Index: 50
 - CAN/ULC-S102-M88
- Non-combustible:
 - ASTM E136 / Meets requirements

Physical/Chemical Properties

- Thermal Resistance:
 - ASTM C518 and/or ASTM C177 at 75°F (24°C) mean temperature: see table at left
- Acoustical Performance: see tables on other side
- Water Vapor Sorption:
 - ASTM C1104 / No greater than 5.0% by weight
- Corrosiveness:
 - ASTM C665 / Meets requirements for steel, copper and aluminum
- Odor Emission:
 - ASTM C1304 / Pass
- Fungi Resistance:
 - ASTM C1338 / Pass Test

Quality Assurance

CertainTeed's commitment to quality and environmental management has ensured the registration of the Athens, Chowchilla and Kansas City plants to ISO 9001:2000 and ISO 14001:2004 standards.

unfaced Roof
wall
Roof →

www.certainteed.com/insulation/hvac-mechanical

AVAILABILITY AND COST

Manufactured and sold throughout the United States and Canada. For availability and cost, contact your local distributor or call CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

WARRANTY

In as much as CertainTeed has no control over installation design, installation workmanship, accessory materials or conditions of application, CertainTeed does not warrant the performance or results of any installation containing its products.

MAINTENANCE

An inspection and preventative maintenance program for the insulation and vapor retarder system is recommended to ensure optimum performance.

TECHNICAL SERVICES

Technical assistance can be obtained either from the local CertainTeed sales representative, or by calling CertainTeed Sales Support Group in Valley Forge, PA at 800-233-8990.

FILING SYSTEMS

- CertainTeed Pub. No. 30-25-056.
- Additional product information available upon request.

Roof →

SOUND ABSORPTION UNFACED

R-Value	Nom. Thickness		Absorption Coefficients @ Octave Band Frequencies (Hz)						NRC
	in.	mm	125	250	500	1000	2000	4000	
10	3 3/4	86	0.29	0.82	1.02	0.94	0.96	0.98	0.95
11	3 3/4	95	0.39	0.91	1.01	0.92	0.98	0.98	0.95
13	4 3/4	111	0.53	0.97	1.04	0.90	0.95	0.98	0.95
16	5 1/4	133	0.67	1.05	1.02	0.92	0.98	0.99	1.00
19	6 3/4	162	0.89	1.22	1.02	0.98	1.01	1.00	1.05

Sound absorption tested in accordance with ASTM C423 using Type A mounting per ASTM E795.

SOUND TRANSMISSION

Construction Type	Transmission Loss in dB at the Octave Frequencies						STC Rating
	125	250	500	1000	2000	4000	
ROOFS							
No Insulation	12	13	19	24	30	32	24
R-10 Faced 202-96 Insulation Over the Purlins	12	16	26	37	45	49	29
R-19 Faced 202-96 Insulation Over the Purlins	13	20	30	41	49	51	32
202-96 Insulation Over & Between the Purlins to Fill the Cavity (R-25 Combined)	14	24	34	44	53	56	36
WALLS							
No Insulation	12	14	19	19	20	27	21
R-10 Faced 202-96 Insulation Over the Girts	13	16	25	32	37	46	28
R-13 Faced 202-96 Insulation Over the Girts	13	17	26	33	38	47	29
R-13 Faced 202-96 Insulation Over the Girts 3-5/8" Steel Studs on 24" Centers with 1/2" Gyp. Board on Interior	26	40	51	60	64	65	50
R-13 Faced 202-96 Insulation Over the Girts 3-5/8" Steel Studs on 24" Centers with R-11 Batts & 1/2" Gyp. Board on Interior	31	43	55	68	73	75	54

Sound Transmission Class (STC) in accordance with ASTM E90.

- Roof construction is 24ga. standing seam roof with 8" Z purlins on 5' centers.
- Wall construction is 28ga. wall panels screwed to 8" Z girts placed on 7' centers.
- Interior metal lurring wall studs were 3-5/8" by 25ga. on 24' centers.



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