

**CAFco<sup>®</sup> CELLU-SHIELD<sup>®</sup>**

**THERMAL/ACOUSTICAL CELLULOSE INSULATION**

**Product Description:**

CAFco<sup>®</sup> CELLU-SHIELD<sup>®</sup> is a spray applied cellulose material developed specifically to meet thermal and acoustical needs. CAFco CELLU-SHIELD is ideally suited for light gauge steel panels, concrete slab construction, underside of roof decks, cold storage facilities, or when a high thermal value (R-value) is required. In addition to its thermal properties, CAFco CELLU-SHIELD can be effectively used for acoustical treatment, due to the material's high noise reduction coefficient (NRC).

**Product Advantages**

- Unique dual purpose product combines acoustical benefits with thermal insulation.
- Tested R-Value of 3.90 per inch of material per ASTM C518.
- Excellent noise reduction coefficient ratings (NRC) up to 1.05.
- Formulated to resist mold and fungal growth.
- High recycled content (>80% post-consumer) and other environmentally friendly characteristics provide significant LEED credits.
- Capable of achieving bond strength values of >150 psf.

**Tested Performance**

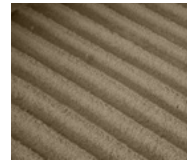
- CAFco CELLU-SHIELD has also been tested for surface burning characteristics in accordance with ASTM E84 and is rated Class A.
- Flame Spread: ≤ 10
- Smoke Development: ≤ 25

**Light Reflectance Value**

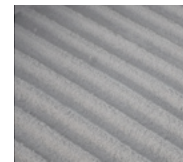
- Black: < 35
- Tan: 55 - 65
- Grey: 65 - 75
- White: ≥ 85



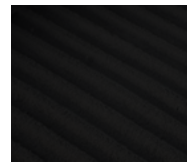
SW7056\*



SW9108\*



SW7016\*



SW6994\*

\*Recommended Sherwin Williams Color Match

ACOUSTICAL PERFORMANCE								
Thickness	Base	Frequency						NRC
		125	250	500	1000	2000	4000	
		Coefficient Rating						
1" (25mm)	Solid	0.05	0.22	0.58	0.96	0.98	1.08	0.70
1.5" (38mm)	Solid	0.12	0.45	0.87	1.04	0.99	1.11	0.85
2" (50mm)	Solid	0.18	0.73	1.12	1.09	1.01	1.00	1.00
5" (127mm)	Solid	0.93	1.28	1.02	1.00	0.97	1.00	1.05
1.5" (38mm)	1.5" deck	0.30	0.94	1.11	1.05	1.04	1.10	1.05
1" (25mm)	3" deck	0.58	0.90	0.98	0.99	1.03	1.07	1.00
1.5" (38mm)	3" deck	0.62	1.06	1.09	1.06	1.06	1.10	1.05

THERMAL PERFORMANCE	
Conductivity (k)*	Resistance (R/inch)
0.28 BTU in/hr ft <sup>2</sup> °F @ 75°F (0.048 W/m·K at 24° C)	3.90

# CAFCO® CELLU-SHIELD® Guide Specification

## SECTION 07 21 29

The following is an outline/short language specification. Complete specifications for the Spray-Applied Thermal / Acoustical Treatment is available on various media upon request.

### PART 1 – GENERAL

#### 1.01 Section Includes

- A. Sprayed cellulose thermal insulation.
- B. Sprayed cellulose acoustical insulation

#### 1.02 Related Items

- A. Clips, hangers, supports, sleeves and other attachments to spray bases are to be placed by other trades prior to the application of sprayed insulation.
- B. Ducts, piping, conduit or other suspended equipment shall not be positioned until after the application of sprayed insulation.
- C. Roof penetrations to be installed prior to application.
- D. Roof traffic and construction to be done prior to application.

#### 1.03 Quality Assurance

- A. Manufacturer must have a current Underwriters Laboratories (UL) Code Evaluation Report.
- B. Manufacturer must be in compliance with the 2009 and 2012 International Building Code.
- C. Manufacturer must be ISO 9001:2015 Certified.
- D. Applicator: Licensed by manufacturer.
- E. Manufacturer must subscribe to independent laboratory followup inspection services of Underwriters Laboratories and Factory Mutual. Each bag shall be labeled accordingly.
- F. Mock-up: Apply a 100 square foot representative sample to be reviewed by the Architect and/or Owner prior to proceeding.

#### 1.04 Submittals

- A. Submit product data that the product meets or exceeds the following specified requirements.
  - 1. Bond strength shall be greater than 150 psf per ASTM E 736.
  - 2. Product shall be Class 1 Class A per ASTM E 84/ UL 723.
  - 3. Non-corrosive per ASTM C 739.
  - 4. Bond Deflection per ASTM E 759: 6" Deflection in 10' Span – No Spalling or Delamination.
  - 5. R-Value to be 3.90 per inch per ASTM C 518.
  - 6. Comply with 2009 IBC Section 803.10 stability requirements for interior finishes.
  - 7. Meet ASTM C 1149
- B. Minimum Fiber Recycled Content to be 80%.
- C. Cannot contain any added Urea-Formaldehyde Resin

#### 1.06 Delivery, Storage and Handling

- A. Deliver in original, unopened containers bearing name of manufacturer and product identification.
- B. Store materials dry, off ground, and under cover.
- C. Protect liquid adhesive from freezing.
- D. Water to be potable

### PART 2 – PRODUCTS

#### 2.01 Acceptable Manufacturers

- A. Isolatek International  
41 Furnace Street  
Stanhope, NJ 07874  
(973)347-1200  
www.isolatek.com

#### 2.02 Materials

- A. CAFCO CELLU-SHIELD
  - 1. Color shall be from Manufacturer's standard color chart.
  - 2. Comply with local Building Code requirements.

### PART 3 – EXECUTION

#### 3.01 Examination

- A. Examine surfaces and report unsatisfactory conditions in writing. Do not proceed until unsatisfactory conditions are corrected.
- B. Verify surfaces to receive spray insulation to determine if priming/sealing is required to ensure bonding and/or to prevent discoloration caused by migratory stains.

#### 3.02 Preparation

- A. Provide masking, drop cloths or other satisfactory coverings for materials/ surfaces that are not to receive insulation to protect from over-spray.
- B. Coordinate installation of the sprayed cellulose fiber with work of other trades.
- C. Prime surfaces as required by manufacturer's instructions or as determined by examination.

#### 3.03 Installation

- A. Install spray applied insulation according to manufacturer's recommendations.
- B. Install spray applied insulation to achieve an average R-Value of \_\_\_\_.
- C. Install spray applied insulation to achieve an average NRC of \_\_\_\_.
- D. Cure insulation with continuous natural or mechanical ventilation at minimum rate of 4 complete air exchanges per hour.
- E. Remove and dispose of over-spray in accordance with local guidelines.



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