

CSI MasterFormat® Filing: Division 7: Thermal & Moisture Protection

07 21 00 Thermal Insulation
07 21 29 Sprayed Insulation

Division 9: Finishes

09 81 00 Acoustic Insulation
09 81 29 Sprayed Acoustic Insulation
09 83 00 Acoustic Finishes
09 83 16 Acoustic Ceiling Coating



MANUFACTURER INFORMATION:

International Cellulose Corporation
12315 Robin Boulevard | Houston, Texas 77045
(713) 433-6701 or (800) 444-1252 | FAX: (713) 433-2029

1. PRODUCT DESCRIPTION:

The K-13 High-R System is a mechanically supported insulation system for applications of K-13 exceeding 5" thick to meet project requirements for higher R-Values. K-13 **Thermal** and **Acoustical** cellulose insulation used as an insulation/exposed finish for its acoustic and thermal benefits. K-13's monolithic coating absorbs excess noise and provides an **R-value of 3.75 per inch**. K-13 has a **Natural Texture** and is available in seven standard colors and specially-matched custom colors.

2. BASIC USE:

K-13 is typically used as an exposed ceiling finish for its acoustic and thermal benefits. The K-13 High-R System is a more efficient mechanically supported system providing up to R-37.5 per projects requirements. It is appropriate in both interior and covered exterior applications such as parking decks.

3. MATERIAL COLORS:

K-13 is available in seven standard colors can also be specified in specially-matched custom colors.

STANDARD COLORS:



Color selection will affect the final price.

4. SURFACE PREPARATION:

K-13 adheres to properly prepared substrates and conforms to any ceiling configuration including metal decking, barrel-vaults, concrete "T" corrugated decks, and other complex surfaces. Surfaces to receive K-13 are to be inspected prior to installation to determine if pretreatment is required.

5. APPLICATION:

The K-13 High-R System begins with installation of 6" stick pins starting 3" from wall in an approximate 16"x16" grid-like pattern. A base layer of K-13 Tan is applied at 4-5" thick. StructaLath III wiring is then secured to stickpins with 1.5" washers over the base layer. The final layer of K-13 is applied to meet projects specification for color and thermal requirements.

K-13 is installed by an international network of professional contractors licensed by ICC. These contractors are required to install K-13 using approved equipment, materials, and procedures. Due to the inherent texture of the material and application techniques, the installed material will have thickness variances. Compliance with applicable building codes and project requirements is the responsibility of the user and/or installing contractor.

SUSTAINABLE CREDIT CATEGORIES:

MATERIALS + RESOURCES:

RECYCLED CONTENT: 80% Pre-Consumer

REGIONAL MATERIALS: Manufactured by International Cellulose Corporation in Houston, TX.

MATERIAL INGREDIENT REPORTING: Inventoried to 1,000 PPM in accordance with the HPD Collaborative.

INDOOR ENVIRONMENTAL QUALITY:

INDOOR AIR QUALITY: UL GREENGUARD Gold Certified
May Contribute Towards:

LEED v4: Indoor Air Quality Assessment

LEED v4: Enhanced Indoor Air Quality Strategies

THERMAL COMFORT: K-13 has exceptionally low heat-loss characteristics with an R-Value of 3.75

ACOUSTICAL PERFORMANCE

LOW-EMITTING MATERIALS:

M1 Classified as a Low-Emitting Building Material
Compliant With:

LEED v4: Low-Emitting Materials

CDHP/ California Section 01350

SCAQMD Rule 1168

CHPS - Acoustical Ceiling



MECHANICALLY SUPPORTED INSULATION SYSTEM TECHNICAL DATA SHEET

TECHNICAL DATA:

ASTM STANDARDS COMPLIANCE

- ASTM C 423 Sound Absorption
- ASTM C 518 Thermal Conductivity
- ASTM C 739 Cellulosic Fiber
- ASTM C 1149 Spray-Applied Cellulose Insulation
- ASTM D 2244 Light Reflectance
- ASTM E 84 Surface Burning Characteristics
- ASTM E 90 Sound Transmission
- ASTM E 736 Cohesion/Adhesion - Bond Strength
- ASTM E 759 Bond Deflection
- ASTM E 859 Air Erosion
- ASTM E 1042 Acoustical Absorption

ASTM C 518: Thermal Conductivity

R-Value: 3.75 PER INCH

| AVG. APPLICATION THICKNESS | R-VALUE |
|----------------------------|---------|
| 1" | 3.75 |
| 2" | 7.5 |
| 3" | 11.25 |
| 4" | 15 |
| 5" | 18.75 |
| 6" | 22.5 |
| 7" | 26.25 |
| 8" | 30 |
| 9" | 33.75 |
| 10" | 37.5 |

ASTM D 2244: Light Reflectance

| | |
|-----------------|------------|
| White: 84+ | Tan: 46+ |
| Light Gray: 73+ | Gray: 45+ |
| Beige: 71+ | Black: 17+ |

ASTM E 84: Surface Burning Characteristics

CLASS 1, CLASS A RATED per ASTM E 84, UL 723, NFPA 255, & UBC-42

Flame Spread 5

Smoke Development 5

K-13 has been rated and approved by Factory Mutual Research Corporation for use in categories: I, II, III, & IV.

ASTM E 736: Cohesion/Adhesion - Bond Strength

Bond Strength >100psf

K-13 meets IBC 2009 Section 803.10 Stability requirements for Interior Finish materials.

ASTM C 423: Sound Absorption

K-13 APPLIED ON SOLID BACKING*

| Inches | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | NRC |
|--------|--------|--------|--------|---------|---------|---------|------|
| 1" | .11 | .32 | .84 | .99 | 1.01 | .98 | .80 |
| 1.75" | .30 | .74 | 1.14 | 1.06 | .99 | .98 | 1.00 |
| 2" | .47 | .90 | 1.06 | 1.06 | 1.08 | 1.07 | 1.00 |
| 3" | .57 | .99 | 1.04 | 1.03 | 1.00 | .98 | 1.00 |
| 4" | .84 | 1.06 | 1.01 | 1.03 | 1.00 | .98 | 1.05 |
| 5" | .99 | .89 | 1.05 | 1.03 | 1.00 | 1.00 | 1.00 |

K-13 APPLIED ON 1.5" METAL DECK*

| Inches | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | NRC |
|--------|--------|--------|--------|---------|---------|---------|------|
| 1.5" | 0.36 | 0.89 | 1.26 | 1.07 | 1.01 | 1.00 | 1.05 |
| 3" | 0.97 | 1.04 | 1.13 | 0.99 | 0.95 | 0.98 | 1.05 |

K-13 APPLIED ON 2" METAL DECK*

| Inches | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | NRC |
|--------|--------|--------|--------|---------|---------|---------|------|
| 1" | 0.39 | 0.63 | 0.96 | 0.99 | 1.04 | 1.06 | 0.90 |
| 2" | 0.55 | 0.99 | 1.13 | 1.06 | 1.05 | 1.10 | 1.05 |

K-13 APPLIED ON 3" METAL DECK*

| Inches | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | NRC |
|--------|--------|--------|--------|---------|---------|---------|------|
| 1.5" | 0.55 | 0.92 | 1.11 | 1.02 | 0.95 | 0.99 | 1.00 |
| 2.75" | 0.69 | 0.98 | 1.17 | 1.03 | 0.97 | 1.04 | 1.05 |

MISCELLANEOUS CODE APPROVALS & SPECIFICATIONS

- Underwriters Laboratories – Classified Code Compliance Report UL ER 5499
- Factory Mutual Research – Report Nos. 19678, 20399, and 24703
- Federal Defense Logistics Agency Cage Code: ONJU2
- Federal Specification – SS-S-111C
- Corps of Engineers Guide Specifications – CE-201.01
- Department of the Navy Guide Specifications – NFGS-07218
- EPA 40 CFR Part 248
- Los Angeles – RR-24311
- New York – MEA 65-96-M
- Meets California Bureau of Home Furnishings Standards
- Resource Conservation and Recovery Act

K-13 does not contain silica dust, asbestos, mineral or glass fibers, or PCB's.



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