

K-13[®] Technical Data & Submittal Package

May 2002

Application

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. Surfaces to receive K-13 are to be inspected prior to installation to determine if pre-treatment is required. 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.

Acoustical Performance

K-13 SPRAYED THERMAL AND ACOUSTICAL INSULATION APPLIED TO SOLID BACKING¹

THICKNESS ¹	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
0.63"	0.05	0.16	0.44	0.79	0.90	0.91	.55
0.75"	0.06	0.19	0.55	0.89	0.91	0.93	.65
1.00"	0.08	0.29	0.75	0.98	0.93	0.96	.75
1.25"	0.11	0.40	0.85	1.02	0.96	0.97	.80
1.50"	0.15	0.51	0.95	1.06	0.99	0.98	.90
1.75"	0.19	0.60	1.05	1.11	1.03	0.98	.95
2.00"	0.26	0.68	1.05	1.10	1.03	0.98	.95
2.25"	0.33	0.76	1.05	1.08	1.02	0.98	1.00
2.50"	0.41	0.84	1.05	1.07	1.02	0.99	1.00
2.75"	0.49	0.91	1.05	1.05	1.01	0.99	1.00
3.20"	0.57	0.99	1.04	1.03	1.00	1.00	1.00

K-13 SPRAYED THERMAL AND ACOUSTICAL INSULATION APPLIED TO 1.5" RIBBED METAL DECK¹

THICKNESS ¹	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
1.62"	0.36	0.89	1.26	1.07	1.01	1.00	1.05
2.00"	0.56	0.94	1.22	1.04	0.99	0.99	1.05
2.50"	0.77	0.99	1.17	1.02	0.97	0.99	1.05
3.06"	0.97	1.04	1.13	0.99	0.95	0.98	1.05

¹Some values interpolated. Listed thicknesses are average.

Fire Performance Ratings

Surface Burning Characteristics

K-13 has a Class 1, Class A flame spread rating per ASTM E-84, UL-723, NFPA-255 and UBC-42.

Flame Spread 5
Smoke Developed 5
Underwriters' Laboratories Ref #R5499

Code Approvals & Certifications

- ISO 9002 Certified
- ICBO- No. 2262
- CBO – No. 2262
- SBCCI – No. 9566
- Underwriters Laboratories – Ref. No. R5499
- Los Angeles – RR-24311
- New York – 79-73-SM
- Dade County – 92-0107.8
- Factory Mutual Research – Report Nos. 19678, 20399, and 24703
- Meets California Bureau of Home Furnishings Standards
- Resource Conservation and Recovery Act
- EPA 40 CFR Part 24

ASTM Standards Compliance

- ASTM-C-177 Thermal Conductivity
- ASTM E-119 Full Scale Fire Wall Test, including Hose Stream Test
- ASTM E-84 Surface Burning Characteristics
- ASTM C-423 Noise Reduction Coefficients
- ASTM C-523 Light Reflectance
- ASTM E-736 Bond Strength
- ASTM E-859 Air Erosion
- ASTM C-739 Moisture Absorption
- ASTM E-90 Sound Transmission Loss
- ASTM E-413 Sound Transmission Loss
- ASTM E-1042 Acoustical Absorption
- ASTM C-1149 Spray-applied Cellulose Insulation

Test reports available upon request.

Federal Specifications

- Federal Defense Logistics Agency Cage Code: ONJU2
- Department of the Navy Guide Specifications – NFGS-07218
- Corps of Engineers Guide Specifications – CE-201.01
- Federal Specification – SS-S-111C

Standard Colors

- White
- Beige
- Tan
- Lt. Grey
- Grey
- Black

Factory Mutual Approvals

K-13 has been rated and approved by Factory Mutual Research Corporation for use in the following categories:

- **Category I:** As an interior finish material of low fire hazard (Class I Building Material) over noncombustible surfaces not requiring automatic sprinkler protection in and of itself. Minimum installed thickness of 1".
- **Category II:** As a protective coating to delay the ignition and reduce the surface burning rate of combustible wood and cellulosic fiber building materials. Minimum installed thickness of 1".
- **Category III:** As a protective coating to delay the ignition and reduce the surface burning rate of low melting, combustible cellular plastic building materials and to protect their dimensional stability for a brief period. Minimum installed thickness of 1¼".
- **Category IV:** As a protective coating for building structural steel to supplement automatic sprinkler protection in preventing structural failure temperatures of the steel in high fire hazard occupancies. Minimum installed thickness of 1".
- **Category V:** As a protective coating to the underside of Class II insulated steel roof deck construction to sufficiently lower the rate of fuel contribution from the Class II deck components to qualify the construction as Class I allowing automatic sprinkler protection to be omitted where permissible under Factory Mutual Standards. Minimum installed thickness of 1".

Specification

PART 1 – GENERAL

1.01 Section Includes

Edit acoustical where required

- A. Sprayed cellulose thermal [and 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.

1.03 Quality Assurance

- A. Manufacturer must be ISO 9002 Certified.
- B. Applicator: Licensed by manufacturer.
- C. Manufacturer must subscribe to independent laboratory follow-up inspection services of Underwriters Laboratories and Factory Mutual. Each bag shall be labeled accordingly.
- D. 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 and manufacturer's certificate that the product meets or exceeds specified requirements.
- B. Manufacturer's written certification that product contains no asbestos, fiberglass or other man-made mineral fibers.
- C. Copy of manufacturer's ISO 9002 Certification.

1.05 Delivery, Storage and Handling

- A. Deliver in original, unopened containers bearing name of manufacturer, product identification and reference to U.L. testing.
- B. Store materials dry, off ground, and under cover.
- C. Protect liquid adhesive from freezing.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. International Cellulose Corporation
12315 Robin Boulevard
Houston, Texas 77045
(713) 433-6701 or (800) 444-1252
FAX: (713) 433-2029
www.spray-on.com icc@spray-on.com
- B. Professionally Installed By:
Lawrence B. Wohl, Inc. www.wohldiversified.com
49 Beech Street
Port Chester, N.Y. 10573 wohldiversified@verizon.net
(914)939-5250

2.02 Materials

A. K-13 Spray-On-Systems.

Color selection will affect price

1. Color shall be as indicated in Schedule 3.05.

Add Thermal Resistance values if applicable

2. Apply at minimum thickness to provide R value(s) as indicated in Schedule 3.05.
3. Comply with ASTM E-736 for field-tested bond strength; tested @ > 5 years:
 - a. Not less than 400 psf
 - b. Not less than 600 times its weight @ 1"
4. Comply with ASTM E-84/U.L. 723, Tested at a minimum of 5" thickness Class I, Class A

Flame Spread:	5
Smoke Development:	5
5. Comply with local Building Code requirements.
6. Comply with ASTM E-1042.

Edit NRC rating if applicable

7. NRC Rating:
 - a. Install at a minimum thickness to achieve a NRC rating as indicated in the Schedule 3.05.

K-13 Sprayed Thermal and Acoustical Insulation ASTM C-423 on Solid Backing*							
Inches	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
1.00	0.08	0.29	0.75	0.98	0.93	0.96	0.75
1.00**	0.47	0.90	1.10	1.03	1.05	1.03	1.00
2.00	0.26	0.68	1.05	1.10	1.03	0.98	0.95
3.00	0.57	0.99	1.04	1.03	1.00	1.00	1.00

K-13 Sprayed Thermal and Acoustical Insulation Applied at 1.5" Ribbed Metal Deck*							
Inches	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
1.50	0.36	0.89	1.26	1.07	1.01	1.00	1.05
3.00	0.97	1.04	1.13	0.99	0.95	0.98	1.05

*Some values interpolated **On lath

8. Non-corrosive per ASTM C 739.
9. Bond Deflection per ASTM E-759: 6" Deflection in 10' Span – No Spalling or Delamination
10. Cohesive Strength at time of application per Method WS-2000: >700 Grams

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 insure 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. Thickness will be determined as the minimum thickness measured as per ASTM E- 605 field test procedure.
- C. Install spray applied insulation according to manufacturer's recommendations.
- D. Cure insulation with continuous natural or mechanical ventilation.
- E. Remove and dispose of over-spray.

3.04 Protection

- A. Protect finished installation under provision of Division 1.

3.05 Schedule

Provide a schedule when insulation requires listing by color, insulation value, NRC values and attributes.

END OF SECTION

K-13® is a registered trademark of International Cellulose Corporation. ICC conducts continuous research and development. Specifications are subject to change without notice.
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