



Precise & Snug Insulation

PROJECT

NASA Lewis Research Center
2100 Brookpark Rd.
Cleveland, OH 44135

SPECIFICATIONS

Beth A. Cooper, P.E., INCE Bd. Cert.
Acoustical Engineer
Manager, Noise Problems

DETAILS

K-13° White
29,000 Square Feet
2" Thickness

Day after day, year after year factory workers report to work knowing that they are going to be subjected to another eight hours of noise. Since hearing loss is gradual, many do not even realize how much their hearing has been affected by the noise in the workplace. Noise doesn't just hurt your hearing, too much noise can make you feel tired, nervous or even irritable. It can even raise your blood pressure which can lead to heart disease.

NASA Lewis Research takes noise abatement very seriously. Of all the options available, they chose ICC's K-13 spray-applied thermal/acoustic insulation to remedy the reverberant noise problems in their metal fabrication shop. The entire installation was accomplished during the evening hours in only two weeks, creating no interruption to the building's normal activities. The real advantage, said Beth Cooper, was that "the acoustic finish did not intrude into the work

space or interfere with the operation of the overhead crane." Everyone immediately noticed how much more intelligible the PA system was after the K-13 installation.

K-13 reduces reverberation and noise levels. The result is a more comfortable working environment providing greater utilization of the building. Overall noise level reductions of over 8-15 dB have been obtained in many different industrial applications. This high acoustical absorption assists in meeting OSHA noise level requirements.

The high thermal conductivity of metal surfaces transmits heat freely making heating and cooling costs astronomical. K-13 provides a uniform insulation coating, significantly reducing heat loss/gain. Other types of insulations leave voids and compressions, greatly reducing their performance.

Superior acoustic control and thermal qualities, the ability to conform to any sub-

strate configuration and an attractive, uniform texture made K-13 the best ceiling finish for the NASA Lewis Research Center. For new construction or renovation projects, International Cellulose Corporation's family of products offer the ideal ceiling treatment for any thermal or acoustic insulation need. Contact Precise & Snug Insulation today at **866/623-9266** for complete details on how ICC products can quiet noisy industrial facilities.



K-13® Spray On Systems
Thermal and Acoustical Insulation
Specification Guide

PART 1 - GENERAL

1.01 Section Includes:

Edit Acoustical Where Required

- A. Sprayed cellulose thermal and acoustical insulation.

1.02 Related Work

- 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 Laboratory and Factory Mutual. Each bag shall be labeled accordingly.
- D. Mock-Up: Apply a representative sample feet 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 material from freezing.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. International Cellulose Corporation
12315 Robin Blvd.
Houston, TX 77045
- B. For approved applicators contact ICC

2.02 Materials

- A. K-13 Spray-On Systems
 - 1. Color shall be as indicated in Schedule 3.05
 - a. Color selection will affect price
 - 2. Apply at minimum thickness to provide R-Value(s) as indicated in Schedule 3.05.
 - a. Add thermal resistance values if applicable
 - 3. Comply with ASTM E-736 for field-tested bond strength: tested at > 5 years:
 - a. Not less than 400 psf
 - b. Not less than 600 times its weight at 1"

- 4. Comply with ASTM E-84/U.L. 723, Tested at minimum of 5" thickness Class I

Flame Spread 5 (Class1)
 Smoke Development 5 (Class1)

- 5. Comply with local Building Code requirements.

- 6. Comply with ASTM E-1042.

- a. 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/ Acoustical Insulation ASTM C-423 on Solid Backing*

Inches	125HZ	250HZ	500HZ	1000HZ	2000HZ	4 000HZ	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	1.04	1.13	0.99	0.95	0.98	1.05

K-13 Sprayed Thermal/ Acoustical Insulation at 1.5" Ribbed Metal Deck*

Inches	125HZ	250HZ	500HZ	1000HZ	2000HZ	4 000HZ	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 ensure bonding and/or 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 prevent damage to overspray.
- 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.
- B. Install spray applied insulation according to manufacturer's recommendations.
- C. Cure insulation with continuous natural or mechanical ventilation.
- D. Remove and dispose of over-spray.

3.05 Schedule

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



12315 ROBIN BLVD.
 HOUSTON, TX 77245

Professionally installed by:



Minimum 80% recycled content