

ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07210—Building Insulation

REPORT HOLDER:

INTERNATIONAL CELLULOSE CORPORATION
12315 ROBIN BOULEVARD
HOUSTON, TEXAS 77045
(713) 433-6701
www.spray-on.com

EVALUATION SUBJECT:

**K-13, CELBAR SPRAY, AND URE-K SPRAY-ON
INSULATIONS, AND CELBAR LOOSEFILL INSULATION**

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Surface-burning characteristics
- Fire-resistance-rated construction
- Thermal performance (*R*-values)

2.0 USES

The K-13, Celbar Spray, Ure-K and Celbar Loosefill are cellulose insulations recognized under IBC Section 719 and IRC Section R316. K-13, Celbar Spray and Ure-K are spray-on thermal insulation materials and may be used as components of nonload-bearing, one-hour fire-resistance-rated walls. Ure-K may be sprayed over cellular foam plastics as a thermal barrier. Celbar Loosefill is used as a loose-fill thermal insulating material.

3.0 DESCRIPTION

3.1 K-13:

The K-13 spray-on insulation consists of recycled and processed paper fibers that are mixed with a controlled amount of fire-retardant chemicals and combined with a dry adhesive impregnated during manufacture of the fibers. The K-13 insulation, liquid adhesive, and SK-2000 emulsion are applied to the surface in separate streams, simultaneously, by a specially designed nozzle provided by International Cellulose Corporation. The insulation is sprayed on interior metal or concrete surfaces, to a dry thickness of approximately 4 inches (102 mm). The insulation has a density of 4.0 ± 0.5 pcf (64.1 ± 8.0 kg/m³) when in place and cured.

3.2 Celbar Spray:

The Celbar Spray is the same as the K-13 material, except that it is applied without the liquid adhesive. It is applied to any desired thickness and has a density of approximately 3.3 pcf (52.8 kg/m³) when in place and cured.

3.3 Ure-K:

The Ure-K is the same as the K-13 material. Ure-K is sprayed over polyurethane foam plastic. Ure-K has a nominal density of 4.0 pcf (64.1 kg/m³) when in place and cured.

3.4 Celbar Loosefill:

The Celbar Loosefill is the same as the K-13 material, except that it is poured or blown into stud spaces of wall and joist spaces of ceilings or attics for thermal insulating purposes. The insulation has a nominal settled density of 1.6 pcf (25.68 kg/m³) when in place.

3.5 Thermal Performance:

Refer to Table 1 for the values of thermal conductivity (*k*-value) and thermal resistance (*R*-values) for the thicknesses tested.

4.0 INSTALLATION

4.1 General:

The installation of K-13, Celbar, Ure-K and Celbar Loosefill Spray-On insulations must comply with this report and the manufacturer's published installation instructions. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

The K-13, Celbar Spray, Ure-K and Celbar Loosefill are limited to use in areas where there is no prolonged exposure to water or to heat in excess of 150°F (65°C). Celbar Loosefill is limited to use in areas where condensation does not occur. Celbar Spray is limited to use where it is not left exposed.

The surfaces to receive the material must be clean, dry and free from dust, grease, rust, oil or any other agent tending to reduce adhesion. The material is sprayed to the required thickness in a one-pass operation, covering all projections and surfaces. The insulation must not be placed over, and must be protected from, recessed light fixtures, metal chimneys and other heat-producing elements, the protection being provided by a permanent barrier of fine steel wire mesh or sheet metal, maintaining a minimum 3-inch (76 mm) clearance between the heat-producing items and the insulation. The insulation must not be placed in areas where the temperature exceeds 150°F (66°C).

4.2 Fire-resistance-rated Construction:

The K-13, Celbar Spray and Celbar Loosefill insulations may be placed in the cavities of steel- or wood-framed, nonload-bearing, one-hour fire-resistance-rated partitions with $\frac{5}{8}$ -inch-thick (15.9 mm) Type X gypsum wallboard on each face without affecting the fire rating or any noncombustible recognition. Installation must comply with Chapter 7 of the IBC or Chapter 3 of the IRC. The insulation may also be placed in the cavities of similar wood-stud, one-hour bearing walls without affecting the fire-resistance rating.

5.0 CONDITIONS OF USE

The K-13, Celbar Spray, and Ure-K Spray-on insulations and the Celbar Loosefill insulation described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Use of the insulation in vertical fire-resistance-rated assemblies is limited to the assembly described in Section 4.2 of this report.
- 5.2 The spray-on insulation must be protected from weather during and after installation.

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature.
- 6.2 Reports containing results of testing performed in accordance with ASTM E 84.
- 6.3 Reports containing results of testing performed in accordance with ASTM E 119.
- 6.4 Report containing results of testing performed in accordance with CPSC 16 CFR, Parts 1209.9 and 1404.4.
- 6.5 Reports of thermal conductivity tests in accordance with ASTM C 518.
- 6.6 A quality control manual.

7.0 IDENTIFICATION

The K-13, Celbar Spray, and Ure-K Spray-on insulations and the Celbar Loosefill insulation described in this report are packaged in bags with labels bearing the manufacturer's name (International Cellulose Corporation), the product name, and the date of manufacture; labeling required by Consumer Products Safety Commission (CPSC) 16CFR, Parts 1209.9 and 1404.4; and the evaluation report number (ESR-2110).

TABLE 1—THERMAL PROPERTIES

PRODUCT NAME	THICKNESS (in)	THERMAL RESISTANCE <i>R</i> -VALUES	THERMAL CONDUCTIVITY <i>k</i> -VALUES
K-13 and Celbar Spray	0.573	2.1	0.272
K-13 and Celbar Spray	0.799	3.1	0.255
K-13 and Celbar Spray	2.043	7.5	0.271
Ure-K	1	3.6	0.277
Celbar Loosefill	4	13.6	0.294

For **SI**: 1 inch = 25.4 mm.