



ICBO Evaluation Service, Inc.

A subsidiary corporation of the International Conference of Building Officials

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ACCEPTANCE CRITERIA FOR CEILING SYSTEMS INCORPORATING DECORATIVE FOAM PLASTIC MOLDING

SEPTEMBER, 1991

PREFACE

Evaluation reports issued by the ICBO Evaluation Service, Inc. (ICBO ES), are based upon performance features of the Uniform Building Code,TM Uniform Mechanical Code, Uniform Plumbing Code and related codes. Section 105 of the Uniform Building Code is the primary charging section upon which evaluation reports are issued. Section 105 reads as follows:

The provisions of this code are not intended to prevent the use of any material or method of construction not specifically prescribed by this code, provided any alternate has been approved and its use authorized by the building official.

The building official may approve any such alternate, provided he finds that the proposed design is satisfactory and complies with the provisions of this code and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in suitability, strength, effectiveness, fire resistance, durability, safety and sanitation.

The building official shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the files of the code enforcement agency.

The attached acceptance criteria for the general code sections noted have been issued to provide all interested parties with guidelines on implementing performance features of the codes. The attached acceptance criteria were developed and adopted following public hearings conducted by the Evaluation Committee. These criteria may be revised from time to time as the need dictates.

ICBO ES may consider alternate criteria, provided the proponent submits valid data demonstrating that the alternate criteria are at least equivalent to the attached criteria and otherwise meet the applicable performance requirements of the codes. Notwithstanding that a material, type or method of construction, or equipment, meets the attached acceptance criteria, or it can be demonstrated that valid alternate criteria are equivalent and otherwise meet the applicable performance requirements of the codes, if the material, product, system or equipment is such that either unusual care with its installation or use must be exercised for satisfactory performance, or malfunctioning is apt to cause unreasonable property damage or personal injury or sickness relative to the benefits to be achieved by the use thereof, ICBO ES retains the right to refuse to issue or renew an evaluation report.

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I. SCOPE:

The purpose of this document is to establish minimum conditions of acceptance for recognition in ICBO Evaluation Service, Inc., (ICBO ES) evaluation reports of ceiling systems that incorporate decorative foam plastic molding under Sections Nos. 1705 (e) and 1712 (c) of the 1988 Uniform Building Code.

II. DESCRIPTION:

The decorative molding is made from maximum 5-inch-wide, 1¹/₂-inch-thick urethane foam with a flame-spread rating not exceeding 25 and a smoke-developed rating of 450 or less when tested in accordance with U.B.C. Standard No. 42-1 and a minimum nominal density of 20 pounds per cubic foot.

The molding is designed to be part of an approved suspended ceiling system, supported on metal grid components. Approved mineral fiber panels having a flame-spread rating not exceeding 25 and a smoke-developed rating of 50 or less are placed on top of the urethane foam moldings which may cover up to 50 percent of the projected ceiling area. Sprinkler systems must be evaluated to confirm that ceiling coffers do not affect proper coverage of heads. All fixtures involved with this ceiling system must be supported independently.

III. REQUIRED TESTS:

A. **Flame Spread/Smoke Developed:** The molding shall be tested in accordance with U.B.C. Standard No. 42-1 and have a flame-spread rating not exceeding 25 and a smoke-developed rating of 450 or less. Test specimens shall extend the full length and width of the test chamber.

B. **Ignition Tests:** The self-ignition temperature of the molding shall be determined in accordance with U.B.C. Standard No. 52-3 and be at least 650°F.

C. **Room Corner Test:** A typical system of moldings, grid and mineral fiber-ceiling panels, as shown in Figure No. 1 shall be installed in

a test room and tested as described in U.B.C. Standard No. 17-5. Walls of the test room shall be lined with Type X gypsum wallboard. Recognition will be limited to the assembly tested. Acceptance shall be as follows:

1. Flames do not reach extremities of the ceiling.
2. Smoke is not excessive.
3. Structural panels shall sustain the applied load during the test period.

D. **Drop Out Resistance:** The molding and supported ceiling panel shall remain in place for a period of 25 minutes at 300°F. The test shall be conducted on the largest size module requested for acceptance and a typical mineral fiber ceiling panel installed on the manufacturer's recommended grid system simulating actual end use conditions. The molding must support the ceiling panel during the test period.

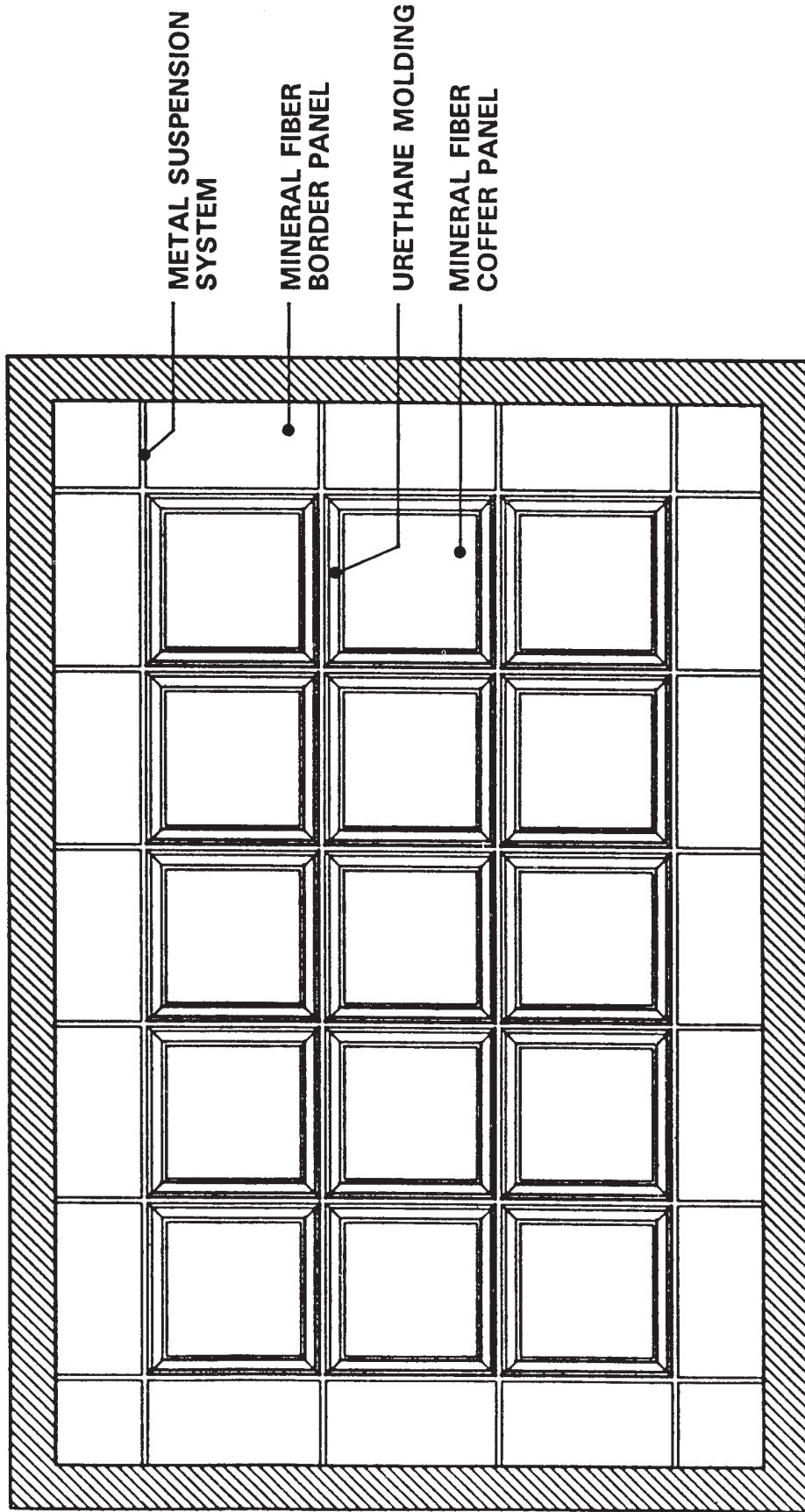
IV. **TESTING AND REPORTING:** Sampling, preparation of test specimens and conduct of tests must be by an ICBO ES recognized testing agency. As an alternate, specimen preparation and testing may be conducted by the proponent, provided a testing agency or qualified independent consultant specifically recognized by the ICBO ES, certifies that sampling, preparation of test specimens, testing, calibration of instruments and reporting of test results comply with accepted procedures. In all cases, an unlisted test facility is subject to an on-site inspection by ICBO ES staff prior to commencement of qualifying tests. The test report must be prepared by the independent agency.

V. **QUALITY CONTROL:** The decorative molding shall be produced under a quality control program administered by an approved inspection agency currently recognized by ICBO ES or the National Evaluation Service.

A quality control manual developed in concert with the approved agency and complying with the ICBO ES Acceptance Criteria for Quality Control Manuals, dated January, 1989 (revised August, 1990) must be submitted.

Ceiling System Incorporating
Decorative Foam Plastic Molding

AC67-R1-0991



PLAN - VIEW

FIGURE NO. 1