



# ICBO Evaluation Service, Inc.

A subsidiary corporation of the International Conference of Building Officials

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## ACCEPTANCE CRITERIA FOR SMOKE CONTROL GASKETING

AC128

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### PREFACE

Evaluation reports issued by the ICBO Evaluation Service, Inc. (ICBO ES), are based upon performance features of the *Uniform Building Code*™, *ICBO Uniform Mechanical Code*™ and related codes. Section 104.2.8 of the *Uniform Building Code* is the primary charging section upon which evaluation reports are issued. Section 104.2.8 reads as follows:

The provisions of this code are not intended to prevent the use of any material, alternate design 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 the building official 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. The 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 that 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 in 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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# ACCEPTANCE CRITERIA FOR SMOKE CONTROL GASKETING

## 1.0 INTRODUCTION

**Scope:** The purpose of this criteria is to establish requirements for ICBO ES recognition, in an evaluation report, of gasketing for smoke- and draft-control door assemblies under Section 1004.3.4.3.2.1 of the 1997 *Uniform Building Code* (UBC). The system would be used with interior fire-resistive elevator hoistway doors and frames. This would permit deletion of the separated elevator lobby requirement found in Section 1004.3.4.5 of the code.

## 2.0 BASIC INFORMATION AND REPORTS OF TESTS

**2.1 Required Information:** The following information must be submitted:

**2.1.1** General information on the manufacturing process.

**2.1.2** Dimensioned scale drawings and details, noting size and configuration.

**2.1.3** Method of product identification.

**2.1.4** Method of field adjustment.

**2.1.5** Inspection and maintenance schedule.

**2.1.6** Maximum temperature exposure necessitating replacement.

**2.1.7** Installation instructions and details. The instructions must address the need, after installation, to field test the system for proper operation.

**2.2 Testing Laboratories:** Testing laboratories shall comply with the ICBO ES Acceptance Criteria for Laboratory Accreditation (AC89).

**2.3 Test Reports:** Test reports and test specimen sampling shall comply with the ICBO ES Acceptance Criteria for Test Reports and Product Sampling (AC85). The test report must be in sufficient detail to identify specimen properties that might affect performance as a smoke- and draft-control assembly. A qualified representative of the testing agency must witness the production, fabrication and installation of test specimens. The testing agency must verify and report the relevant physical properties of the major components and the manner of installation, including a description of fastening elements. Photographs must be included in the report.

## 3.0 PERFORMANCE REQUIREMENTS

**3.1 Air Leakage:** Air leakage tests shall be conducted in accordance with Underwriters Laboratories Inc. (UL) Standard 1784, dated December 8, 1995. Gasketing shall be installed in accordance with manufacturer's instructions on each type of door for which recognition is sought. Hoistway door types are defined in Rule 110.14 of ANSI/ASME A17.1-1996 and include center-opening horizontal slide type, horizontal side

slide type, swing type and vertical biparting slide type doors. Hoistway doors with gasketing installed shall be cycled a minimum of 100,000 open-close cycles prior to air leakage tests.

**Conditions of Acceptance:** The air leakage rating at both ambient [75°F (24°C)] and warm [400°F (204°C)] temperatures shall be less than 3 cfm (1.4 L/s) per square foot (0.093 m<sup>2</sup>) of opening. The water pressure difference shall be 0.1 inch (25 Pa) at ambient temperatures and 0.3 inch (75 Pa) at warm temperatures.

**3.2 Fire Tests:** Fire tests shall be conducted in accordance with UBC Standard 7-2, Part I, 1997 Edition, on each type of hoistway door for which recognition is sought. Hoistway door types are identified in Section 3.1.

**Conditions of Acceptance:** Tests shall demonstrate that the fire performance of the hoistway door is not adversely affected by installation of the gasketing.

## 4.0 MARKING

**4.1 Gasketing Material:** Each section of the gasketing material shall bear the following:

**4.1.1** Name of the manufacturer or private labeler.

**4.1.2** Name or logo of the quality control agency.

**4.1.3** Evaluation report number.

**4.2 Packaging:** In addition, packaging shall bear the following:

**4.2.1** A statement indicating conformance with the requirements of Rule 110.19 (a) and (b) of ANSI/ASME A17.1-1996, Safety Code for Elevators.

**4.2.2** Maximum leakage rating at the specified pressure and temperature conditions found in Section 3.1.

**4.2.3** Type of door assembly for which the gasketing system is recognized.

**4.2.4** A reference to the installation instructions.

**4.2.5** If a manufacturer produces products covered by this criteria at more than one factory, each product shall be provided with a distinctive marking to identify it as the product of a particular factory.

## 5.0 QUALITY CONTROL

**5.1** Product(s) covered by this criteria shall be manufactured under an approved quality control program with inspections by an agency accredited/recognized by ICBO ES or the NES as a compliance assurance/quality control agency.

**5.2** A quality control manual complying with the ICBO ES Acceptance Criteria for Quality Control Manuals (AC10) must be submitted.