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Standard Guide for Lock-Strip Gasket Glazing¹

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1. Scope

1.1 This guide covers the use of lock-strip gaskets in compliance with Specification C 542 in walls of buildings not over 15° from a vertical plane. The prime performance considerations are weathertightness against air and water infiltration, and structural integrity under wind loads. Included are terminology, design considerations, and fabrication tolerances when using lock-strip gaskets in glazing applications.

1.2 The values stated in inch-pound units are to be regarded as the standard. The SI units in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- C 542 Specification for Lock-Strip Gaskets²
- C 716 Specification for Installing Lock-Strip Gaskets and Infill Glazing Materials²
- C 717 Terminology of Building Seals and Sealants²
- C 864 Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers²
- C 963 Specification for Packaging, Identification, Shipment, and Storage of Lock-Strip Gaskets²
- C 1036 Specification for Flat Glass³
- D 1566 Terminology Relating to Rubber⁴
- E 283 Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen⁵
- E 330 Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference⁵

¹ This guide is under the jurisdiction of ASTM Committee C-24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.73 on Compression Seal and Lock-Strip Gaskets.

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² Annual Book of ASTM Standards, Vol 04.07.

³ Annual Book of ASTM Standards, Vol 15.02.

⁴ Annual Book of ASTM Standards, Vol 09.01.

⁵ Annual Book of ASTM Standards, Vol 04.11.

E 331 Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference⁵

3. Terminology

3.1 *Definitions*—Refer to Terminology C 717 for definitions of the following terms used in this guide: bite; compound; edge spacer; elastomer; elastomeric; gasket; glazing; hardness; joint; lock-strip gasket; open cell; seal; sealant; setting block; and spacer. Additional elastomeric terms can be found in Terminology D 1566.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *clamping pressure*—the pressure exerted by the lip of a lock-strip gasket on material installed in the channel when the lock-strip is in place.

3.2.2 *durometer*—(1) an instrument for measuring the hardness of rubber-like materials. (2) a term used to identify the relative hardness of rubber-like materials, for example, “low durometer” (relatively soft) or “high durometer” (relatively hard).

3.2.3 *edge clearance*—the distance between the bottom of a channel of a lock-strip gasket and the edge of material installed in the channel (see Figs. 1 and 2).

3.2.4 *elongation*—increase in length, expressed as a percent of the original length.

3.2.5 *filler strip*—see *lock-strip*, the preferred term.

3.2.6 *flange*—that part of a lock-strip gasket that extends to form one side of a channel (see Figs. 1 and 2).

3.2.7 *H-gasket*—See *lock-strip gasket*, and Fig. 1.

3.2.8 *hinge*—the minimum thickness of gasket material between the channel recess and the lock-strip cavity; the plane at which bending occurs when the flange is bent open to receive or release installed material.

3.2.9 *horizontal ladder gasket*—a ladder gasket installed in a vertical plane in such a way that the intermediate cross members (muntins) are vertical members (see Fig. 3).

3.2.10 *ladder gasket*—a lock-strip gasket in the form of a subdivided frame having one or more integrally formed intermediate cross members (see Fig. 3).

3.2.11 *lip*—the inner face of the tip of a flange on a lock-strip gasket (see Figs. 1 and 2).

3.2.12 *lip pressure*—the pressure exerted by the lip of a lock-strip gasket on material installed in the channel when the lock-strip is in place.

3.2.13 *lock-strip or locking strip*—the strip that is designed