



Designation: C542 – 05 (Reapproved 2017)

Standard Specification for Lock-Strip Gaskets¹

This standard is issued under the fixed designation C542; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification defines the required properties of lock-strip gaskets where resistance to sunlight, weathering, flame, oxidation, permanent deformation under load, and diminution of gripping pressure are prime essentials.

NOTE 1—The requirement of flame propagation may be waived by the architect or professional engineer when doing so does not conflict with local codes or ordinances.

1.2 This specification applies only to the “locking” compression type of gasket, sometimes referred to as the “zipper” type.

NOTE 2—Structural integrity and weather-tightness of the wall requires the sound design and installation of the entire system of which the gasket is only one component.

1.3 The values stated in SI units are to be regarded as the standard.

1.4 *Test Method C1166, as referenced in this specification, should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.*

1.5 The following precautionary caveat pertains only to the test method portion, Section 7, of this specification: *This standard does not purport to address 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.*

1.6 The committee with jurisdiction over this standard is not aware of any comparable standards published by other organizations.

¹ This specification is under the jurisdiction of ASTM Committee C24 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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1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

C1166 Test Method for Flame Propagation of Dense and Cellular Elastomeric Gaskets and Accessories

D15 Method of Compound and Sample Preparation for Physical Testing of Rubber Products (Withdrawn 1975)³

D395 Test Methods for Rubber Property—Compression Set

D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

D573 Test Method for Rubber—Deterioration in an Air Oven

D624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers

D746 Test Method for Brittleness Temperature of Plastics and Elastomers by Impact

D1149 Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment

D2240 Test Method for Rubber Property—Durometer Hardness

2.2 *Other Standard:*

Rubber Handbook, Specifications for Rubber Products⁴

3. Materials and Manufacture

3.1 All materials and workmanship shall be in accordance with good commercial practice.

3.2 Gaskets shall be manufactured from an ozone-resistant compound and shall not be dependent for ozone resistance on

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Rubber Manufacturers Association, 444 Madison Ave., New York, NY.