



Designation: D4313 – 22

Standard Specification for General-Purpose, Heavy-Duty, and Extra-Heavy-Duty Crosslinked Chlorinated Polyethylene (CPE) Jackets For Wire and Cable¹

This standard is issued under the fixed designation D4313; 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.

1. Scope*

1.1 This specification covers crosslinked chlorinated polyethylene (CPE) compounds suitable for use as outer coverings or jackets on electrical cables for general-purpose, heavy-duty, and extra-heavy-duty service.

1.2 These jacket materials are not recommended for use on cables which are to be installed at a temperature less than –25 °C.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *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

D470 Test Methods for Crosslinked Insulations and Jackets for Wire and Cable

D1499 Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics

D1711 Terminology Relating to Electrical Insulation

G153 Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials

¹ This specification is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.07 on Electrical Insulating Materials.

Current edition approved May 1, 2022. Published June 2022. Originally approved in 1987. Last previous edition approved in 2021 as D4313 – 21. DOI: 10.1520/D4313-22.

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. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this specification refer to Terminology D1711.

3.1.2 *aging (act of), n*—exposure of material to air or oil at a temperature and time as specified in the relevant material specification for that material.

4. Physical Properties

4.1 Crosslinked jackets shall conform to the requirements for physical properties specified in Table 1.

4.2 *Tensile Strength and Percent Elongation at Rupture:*

4.2.1 The test is conducted in accordance with Test Methods D470. The requirements for tensile strength and elongation are given in Table 1 of this Specification.

4.3 *Tensile Strength and Percent Elongation at Rupture After Oil Immersion:*

4.3.1 Fluid as specified in the product Standard shall be used.

4.3.2 The test is conducted in accordance with Test Methods D470. The requirements for tensile strength and elongation are given in Table 1 of this Specification.

5. Sunlight and Weather Resistance Requirements

5.1 Test the jacket in accordance with Test Methods D470. If sunlight and weather resistance are required of the cross-linked jackets, the jackets shall conform to the requirements specified in Table 2.

6. Sampling

6.1 Sample the jacket in accordance with Test Methods D470.

7. Test Methods

7.1 Test the jacket in accordance with Test Methods D470. If the sunlight and weather resistance test is required, perform it in accordance with Practices D1499 and G153.

*A Summary of Changes section appears at the end of this standard