

STANDARD INFORMATION

Standard: UL 746C

Standard ID: Polymeric Materials - Use in Electrical Equipment Evaluations [UL 746C:2018 Ed.7+R:21Jan2026]

Previous Standard ID:

Polymeric Materials - Use in Electrical Equipment Evaluations [UL 746C:2018 Ed.7+R:15Dec2025]

Polymeric Materials - Use in Electrical Equipment Evaluations [UL 746C:2018 Ed.7+R:07Mar2025]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **December 15, 2027**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

All products certified to UL 746C must be certified to the January 21, 2026, revision prior to the effective date.

Overview of Changes:

December 15, 2025:

- Addition of exposure and evaluation requirements for polymeric materials exposed to UVC for UV Germicidal Irradiation (UVGI) purposes

January 21, 2026

- Correction to Table 25.1. No technical changes were made to the standard

Specific details of new/revisted requirements are found in table below

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<p>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</p>
		<p><i>New section added;</i></p>
		<p>Ultraviolet Light Germicidal Exposure (UV-C)</p>
25A		<p>UV-C radiation helps to sterilize materials by killing germs and pathogens. Low pressure mercury lamps that are capable of emitting UV-C light at a single wavelength of 254 nm are widely deployed in commercial ultraviolet germicidal irradiance (UVGI) systems that are used for sterilization.</p> <p>See standard for details.</p>
57	Info	Ultraviolet Light Exposure Test (for Weathering or Solar Exposure)
57.1	Info	Apparatus
		<p>Using standard test procedures, property values for the material are to be determined both before and after the conditioning described below. Specimens are to be exposed to ultraviolet light and water spray <u>by in accordance with the Standard Practice for Exposing Nonmetallic Materials in Accelerated Test Devices That Use Laboratory Light Sources, ASTM G151 using the following apparatus, as appropriate:</u></p> <p>a) <u>For UVA/UVB (for example, weathering or solar exposure) evaluations, expose specimens to ultraviolet light and water spray using a Xenon-arc lamp apparatus in accordance with the Standard Practice for Exposing Nonmetallic Materials in Accelerated Test Devices That Use Laboratory Light Sources, ASTM G151, and the Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials, ASTM G155. The spectral power distribution of the xenon lamp shall conform to the requirement in Table 1 in ASTM G155 for a xenon lamp with daylight filters. A programmed cycle of 120 minutes consisting of a 102-minute light exposure and an 18-minute exposure to water spray with light shall be used. The apparatus shall operate with a spectral irradiance of 0.35 W/m² nm at 340 nm and a black-panel temperature of 63 ±3°C (145.4 ±5.4°F); or</u></p> <p style="padding-left: 40px;">Exception: Indoor enclosures that are subjected to UV radiation sources (such as, high intensity discharge lamps), may be conditioned without exposure to water.</p> <p>b) <u>For UVC (for example, germicidal) evaluations, expose specimens to ultraviolet light using a low-pressure mercury lamp apparatus in accordance with the Standard Practice for Operating UVC Lamp Apparatus for Exposure of Materials, ASTM G224. In accordance with ASTM G224, Appendix X2, Table X2.1, Cycle 2, a programmed</u></p>



CLAUSE	VERDICT	COMMENT
		<u>cycle of 120 minutes consisting of a 60 minute light exposure (35 ±3 °C black panel temperature) and a 60 minute dark exposure (30 ±3 °C black panel temperature) shall be used. The apparatus shall operate with a spectral irradiance of 60 W/m2 at 254 nm.</u>
57.2	Info	Method <i>New clause added;</i> Specimens shall be exposed in the respective apparatus for the duration specified below;
57.2.2		a) For UVA/UVB (for example, weathering or solar exposure) evaluations, two sets of specimens for impact and one set for the other properties are to be exposed. The additional set of impact specimens is to be exposed for a total of 500 hours and all other sets for a total of 1000 hours. b) For UVC (for example, germicidal) evaluations, all sets are to be exposed for 336 hours.
		<i>New section added;</i> Ultraviolet Light Germicidal Exposure Test (UV-C)
57A		Using standard test procedures, property values for the material are to be determined both before and after the conditioning as described in 57A.1.2. See standard for details.