UL 746S

STANDARD FOR SAFETY

Evaluation of Sustainable Polymeric Materials for Use in Electrical Equipment

UL Standard for Safety for Evaluation of Sustainable Polymeric Materials for Use in Electrical Equipment, UL 746S

First Edition, Dated August 30, 2023

Summary of Topics

This revision of ANSI/UL 746S dated October 15, 2026 includes changes in requirements of the QA Program Provided in Table 6.2 and 6.4.3.

- ***Removal of the Column with the Title Beginning with "Deletion…" from Table 6.1.***
- ***Modification of Requirements in Table 6.2 and 6.4.3 to Include Test Requirements for Compliance with Mechanically Recycled Plastic QA Program; Revision of 6.4.4.***

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated May 29, 2026 and August 21, 2026.

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August 30, 2023 ***ANSI/UL 746S-2026***

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UL 746S

Standard For Evaluation of Sustainable Polymeric Materials for Use in Electrical Equipment

First Edition

August 30, 2023

This ANSI/UL Standard for Safety consists of the First Edition including revisions through October 15, 2026.

The most recent designation of ANSI/UL 746S as an American National Standard (ANSI) occurred on October 15, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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INTRODUCTION

1 Scope

1.1 This standard establishes program requirements for the evaluation of sustainable polymeric materials for use in electrical equipment. The test program is intended to ensure acceptable material performance with respect to flammability, electrical, mechanical, and other related safety properties.

1.2 This Standard will cover the requirements for using Mechanically Recycled Plastic in various proportions with the virgin material.

2 Units of Measurements

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Referenced Publications

3.1 Any undated reference to a code or standard appearing in the requirements of this Standard shall be interpreted as referring to the latest edition of that code or standard.

3.2 The following publications are referenced in this Standard:

IEC 60695-10-2, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test method*

UL 94, *Standard Tests for Flammability of Plastic Materials for Parts in Devices and Appliances*

UL 746A, *Polymeric Materials – Short Term Property Evaluations*

UL 746B, *Polymeric Materials – Long Term Property Evaluations*

UL 746C, *Polymeric Materials – Use in Electrical Equipment Evaluations*

UL 746D, *Polymeric Materials – Fabricated Parts*

4 Glossary

4.1 For the purposes of this Standard the following definitions apply.

4.1A BATCH – Quantity or material regarded as a single unit and having a unique reference.

4.1B BIOBASED – Derived from biomass.

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4.1C CHEMICAL RECYCLING – Please see Feedstock Recycling, 4.1E.

4.1D FEEDSTOCK – Raw materials that are used to create monomer or polymer.

4.1E FEEDSTOCK RECYCLING – Manufacturing processes that convert waste materials into a feedstock by changing the chemical structure of waste materials to be used in the production of new polymers, monomers, intermediates, or other materials.

NOTE 1 to entry: Processes may include but are such as but not limited to pyrolysis, gasification, depolymerization, solvolysis, catalysis, reforming, purification, hydrogenation, dissolution, dehydrochlorination, and other similar existing or newly developed technologies or processes.

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