

IEC 60335-2-45 Ed. 3.0 b:2005

IEC 60335-2-45 Ed. 3.0 b:2005 Standard Guide

A comprehensive guide to the International Electrotechnical Commission's safety standard for portable heating tools and similar appliances.

1. INTRODUCTION TO THE STANDARD

The IEC 60335-2-45 Ed. 3.0 b:2005 standard is an essential document for ensuring the safety of household and similar electrical appliances, specifically focusing on portable heating tools. This standard outlines particular requirements to mitigate risks associated with these devices, ensuring they meet international safety benchmarks.



Image 1: The official cover of the IEC 60335-2-45 Ed. 3.0 b:2005 standard document.

This guide provides an overview of the standard's content, its scope, and the types of appliances it addresses, serving as a reference for understanding its critical safety provisions.

2. SCOPE OF APPLICATION

The standard applies to portable electric heating tools and similar appliances with a rated voltage not exceeding 250 V. It covers a wide range of devices used in various applications, from DIY projects to professional tasks, where heat is generated for specific functions.

Examples of appliances covered by this standard include:

- Branding tools
- Burning-in pens
- Conduit-soldering tools
- Dehorning tools
- Desoldering irons
- Firelighters
- Glue guns
- Heat guns
- Paint strippers
- Plastic-cutting tools
- Soldering guns
- Soldering irons
- Stripping pliers
- Thermoplastic conduit-welding tools

The standard ensures that these appliances are designed and manufactured to minimize hazards during their intended use.

3. KEY SAFETY REQUIREMENTS

IEC 60335-2-45 details specific safety requirements to protect users from potential electrical, thermal, mechanical, and fire hazards. These requirements are crucial for the safe operation and longevity of the appliances.

Part 2-45: Particular Requirements

This section of the standard provides specific safety provisions tailored to portable heating tools. It addresses unique risks associated with high temperatures, exposed heating elements, and the portable nature of these devices. Compliance with these particular requirements is essential for manufacturers to ensure their products are safe for consumer and professional use.

- Protection against electric shock
- Temperature limits for accessible surfaces
- Mechanical strength and stability
- Resistance to heat and fire
- Insulation and creepage distances
- Marking and instructions for safe use

4. COMPLIANCE AND TESTING

Manufacturers must demonstrate compliance with the IEC 60335-2-45 standard through rigorous testing and adherence to specified design principles. This process typically involves:

1. **Design Review:** Assessing the product's design against the standard's requirements.

2. **Type Testing:** Performing a series of tests on representative samples of the product to verify compliance with electrical, thermal, and mechanical safety criteria.
3. **Quality Control:** Implementing production quality control measures to ensure ongoing compliance of manufactured units.

Adherence to these procedures helps ensure that products placed on the market are safe and reliable.

5. DOCUMENT SPECIFICATIONS

Details regarding the physical and publication attributes of the IEC 60335-2-45 Ed. 3.0 b:2005 standard document are provided below:

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