Irish Standard
I.S. EN 50106:2008

Safety of household and similar electrical appliances - Particular rules for routine tests referring to appliances under the scope of EN 60335-1

I.S. EN 50106:2008

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English version

Safety of household and similar electrical appliances - Particular rules for routine tests referring to appliances under the scope of EN 60335-1

Sécurité des appareils électrodomestiques et analogues - Règles particulières pour les essais de série concernant les appareils dans le domaine d'application de la EN 60335-1

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Besondere Regeln für Stückprüfungen von Geräten im Anwendungsbereich der EN 60335-1

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 61, Safety of household and similar electrical appliances.

During the Brughes meeting of CENELEC TC 61 in June 2005, document 61(SEC)1506 was discussed and it was decided to prepare a new edition of EN 50106 and send it to the voting procedure. Two additional proposals, documents 61(BE)0003/NP and 61(DE)0587/NP, were discussed during the Brussels meeting in November 2005, where it was decided to include them in prEN 50106. Another proposal, document 61(DE)0588/NP, was included as a result of the Malaga meeting in June 2006.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50106 on 2008-06-01.

This European Standard supersedes EN 50106:1997 + A1:1998 + A2:2001.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2009-06-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-06-01

Introduction

The tests detailed in this standard are carried out by the manufacturer and apply to products within the scope of EN 60335-1.

These tests are intended to reveal a variation during the manufacture of appliances which could impair safety. They do not impair the properties and the reliability of the appliance and are to be carried out on each appliance. They are normally carried out on the complete appliance after assembly but the manufacturer may perform the tests at an appropriate stage during production, provided later manufacturing operations would not affect the results.

NOTE Components are not subjected to these routine tests if they have been previously checked by suitable routine tests.

The manufacturer may use a test procedure which is better suited to his production arrangements provided that appliances which withstand those tests have at least the same degree of safety as appliances that withstand the tests specified in this standard.

The routine tests listed in this standard are the minimum considered necessary to cover essential safety aspects. It is the responsibility of the manufacturer to decide if additional routine tests are necessary. It may be determined from engineering considerations that some of the tests required in this standard are impracticable or inappropriate and therefore unnecessary.

If a product fails any of the tests, it is subjected to all of the tests after repair and/or adjustment.

There are no additional requirements for particular appliances unless stated in the relevant standard sheet of Section 2.

SECTION 1 - GENERAL TESTS

1.1 Earth continuity test

A current of at least 10 A, derived from a source having a no-load voltage not exceeding 12 V (a.c. or d.c.), is passed between each of the ***accessible earthed metal parts*** *and*

– *for* ***class I appliances*** *intended to be permanently connected to fixed wiring, the earthing terminal;*

– *for other* ***class I appliances,***

- *the earthing pin or earthing contact of the plug;*
- *the earthing pin of the appliance inlet.*

The voltage drop is measured and the resistance is calculated and shall not exceed

– *for appliances having a* ***supply cord****, 0,2 Ω, or 0,1 Ω plus the resistance of the* ***supply cord****,*

– *for other appliances, 0,1 Ω.*

NOTE 1 The test is only carried out for the duration necessary to enable the voltage drop to be measured.

NOTE 2 Care is to be taken to ensure that the contact resistance between the tip of the measuring probe and the metal part under test does not influence the test results.

1.2 Electric strength test

The insulation of the appliance is subjected to a voltage of substantially sinusoidal waveform having a frequency of approximately 50 Hz or 60 Hz for 1 s. The value of the test voltage and the points of application are shown in Table 1.

Table 1 – Test voltages

Points of application	***Test voltage*** *V*		
	Class I appliances and class II appliances		***Class III appliances***
	Rated voltage		
	≤ 150 V	*> 150 V*	
Between ***live parts*** *and* ***accessible metal parts*** *separated from* ***live parts*** *by*			
• ***basic insulation*** *only*	*800*	*1 000*	*400*
• ***double*** *or* ***reinforced insulation*** [a]	*2 000*	*2 500*	*–*

[a] *For* ***class I appliances****, this test does not need to be carried out on parts of* ***class II construction*** *if the test is considered to be inappropriate.*

NOTE 1 It may be necessary for the appliance to be in operation during the test to ensure that the test voltage is applied to all relevant insulation, for example, heating elements controlled by a relay.