

Australian Standard™

**Environmental testing**

**Part 2.45: Tests—Test A and guidance:  
Immersion in cleaning solvents**

This Australian Standard was prepared by Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment. It was approved on behalf of the Council of Standards Australia on 21 October 2003 and published on 1 December 2003.

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The following are represented on Committee EL-026:

Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturer's Association  
Electrical Compliance Testing Association  
Electrical Regulatory Authorities Council  
Electricity Supply Association of Australia  
Testing Interests (Australia)

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-026, Protective Enclosures and Environmental Testing for Electrical/Electronic Equipment.

The objective of this Standard is to provide the electrotechnology industry with a complete set of environmental test procedures published as a series under AS 60068 *Environmental testing*. This Standard is Part 2.45 of that series.

This Standard is identical with, and has been reproduced from, IEC 60068-2-45:1980, *Environmental testing – Part 2-45: Tests—Test XA and guidance: Immersion in cleaning solvents* including Amendment 1:1993 and Corrigendum 1:1981.

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In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

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## STANDARDS AUSTRALIA

## Australian Standard

**Environmental testing**  
**Part 2.45: Tests—Test XA and guidance:**  
**Immersion in cleaning solvents****1 Scope**

This standard comprises a test procedure whereby specimens to be tested are immersed in a certain solvent at a specified temperature and for a specified time.

If required by the relevant specification, after immersion and drying, specimens shall be rubbed with cotton wool or wrapping tissue paper.

Guidance on the test is given in the annex.

**2 Object**

To determine the effects of prescribed cleaning solvents on electronic components and other parts suitable to be mounted on printed boards when subjected to immersion in the cleaning solvents stated below.

NOTE – This test is not intended to simulate the effects of handling.

**3 Types of test solvents and conditions****3.1 Solvents**

Three commonly used solvents are specified for the purpose of this test.

NOTE – Successful compliance with this test does not imply resistance to other solvents.

3.1.1 A mixture of 1,1,2-trichlorotrifluoroethane,  $70 \pm 5$  % by weight and 2-propanol (isopropyl alcohol),  $30 \pm 5$  % by weight. Commercially available grades (industrial use) shall be used.

**NOTES**

- 1,1,2-trichlorotrifluoroethane will be hereinafter referred to as R 113, in accordance with ISO/ R 817.
- The above mixture is obtainable as a finished product from suppliers of chemicals.

Warning – the component 1,1,2-trichlorotrifluoroethane is hazardous to the environment; therefore this solvent shall not be used where the solvent specified in 3.1.2 is adequate.

3.1.2 Propan-2-ol (isopropyl alcohol) – industrial use – shall be used whenever possible.

NOTE – This solvent is obtainable as a finished product from suppliers of chemicals.

3.1.3 Demineralized or distilled water having a resistivity of not less than  $500 \Omega\text{m}$  corresponding to a conductivity of  $2 \text{ mS/m}$ .

NOTE – In technically justified cases other solvents similar in activity to the recommended ones may be used as prescribed in the relevant specifications.