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Packaging — Transport packaging for dangerous goods — Plastics compatibility testing for packaging and IBCs

*Emballages — Emballages de transport pour marchandises
dangereuses — Essais de compatibilité des matières plastiques pour
emballages et GRVs*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13274 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 261, *Packaging*, in collaboration with Technical Committee ISO/TC 122, *Packaging*, Subcommittee SC 3, *Performance requirements and tests for means of packaging, packages and unit loads*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 13274 cancels and replaces ISO 16101:2004¹⁾ and ISO 23667:2007²⁾, which have been technically revised.

1) ISO 16101:2004, *Packaging — Transport packaging for dangerous goods — Plastics compatibility testing*.

2) ISO 23667:2007, *Packaging — Transport packaging for dangerous goods — Rigid plastics and plastics composite IBCs — Compatibility testing*.

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Introduction

This International Standard was developed to provide requirements and test procedures to meet the compatibility provisions for plastics packagings and Intermediate Bulk Containers (IBCs) to contain liquids as set out in:

- The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) (covering most of Europe) [1] and
- Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) (covering most of Europe, parts of North Africa and the Middle East) [2].

This procedure is an alternative option to that set out in the UN Recommendations on the Transport of Dangerous Goods.

Plastics packaging/IBC material can be attacked by the chemical contents of the package. Such effects are caused by different mechanisms such as environmental stress cracking (ESC) chemical degradation and/or swelling.

The UN Recommendations and the associated modal regulations require that all packagings/IBCs be assessed for compatibility with the substances which they are to contain. The UN text makes special reference to plastics packagings/IBCs for liquids. The procedure therein contains details of testing for six months at ambient temperature with the liquid to be carried. RID/ADR permits as an alternative the use of standard liquids to which this International Standard refers.

The UN Recommendations are given legal entity not only to ADR and RID but also to:

- The International Civil Aviation Organisations Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Tis) (worldwide) [3] and
- The International Maritime Dangerous Goods Code (IMDG Code) (worldwide) [4].

The application of this International Standard will need to take account of the requirements of these international agreements and the relevant national regulations for domestic transport of dangerous goods as required by Directive 2008/68/EC of the European Parliament and council, as modified by Commission Directive 2012/45/EU of 3 December 2012 [5].

Although not stipulated in the UN Recommendations or the model regulations, these tests may be applied, where deemed appropriate, to polyethylene inner packaging of combination packaging.