

**Packaging - Transport packaging for dangerous goods -
Plastics compatibility testing for packaging and IBCs
(ISO 13274:2013)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 13274:2013 sisaldab Euroopa standardi EN ISO 13274:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13274:2013 consists of the English text of the European standard EN ISO 13274:2013.
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English Version

**Packaging - Transport packaging for dangerous goods - Plastics
compatibility testing for packaging and IBCs (ISO 13274:2013)**

Emballages - Emballages de transport pour marchandises
dangereuses - Essais de compatibilité des matières
plastiques pour emballages et GRVs (ISO 13274:2013)

Verpackung - Transportverpackung für gefährliche Güter -
Verträglichkeitsprüfung für Kunststoffverpackungen und
IBCs (ISO 13274:2013)

This European Standard was approved by CEN on 26 July 2013.

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Foreword

This document (EN ISO 13274:2013) has been prepared by Technical Committee ISO/TC 122 "Packaging" in collaboration with Technical Committee CEN/TC 261 "Packaging" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

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

This document supersedes EN ISO 16101:2004, EN ISO 23667:2007.

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Endorsement notice

The text of ISO 13274:2013 has been approved by CEN as EN ISO 13274:2013 without any modification.

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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.

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WARNING — The use of this International Standard could involve hazardous materials and equipment. This International Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies the requirements and test methods for compatibility testing of plastics packagings/Intermediate Bulk Containers (IBCs) and composite packagings/IBCs with plastics inners containing liquids. The testing involves storage with the liquid to be transported. For polyethylene-based packaging, testing with a standard liquid as defined in *The European Agreement concerning the International Carriage of Dangerous Goods by Road* may be undertaken. [Annex B](#) describes small-scale laboratory tests that may be used to determine the assimilation of those products to be carried with the standard liquids.

Where there is any contradiction between this International Standard and any applicable regulation, the regulation always takes precedence.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 1133-1, *Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method*

ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method*

ISO 1628-3, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 3: Polyethylenes and polypropylenes*

ISO 1872-2:2007, *Plastics — Polyethylene (PE) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

ISO 2818, *Plastics — Preparation of test specimens by machining*

ISO 11403-3, *Plastics — Acquisition and presentation of comparable multipoint data — Part 3: Environmental influences on properties*

ISO 11542-2:1998, *Plastics — Ultra-high-molecular-weight polyethylene (PE-UHMW) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

ISO 16495:2013, *Packaging — Transport packaging for dangerous goods — Test methods*