
Packaging and the environment — Marking for material identification

Emballage et environnement — Marquage pour l'identification des matériaux

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 122, *Packaging*, Subcommittee SC 4, *Packaging and the environment*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The purpose of this document is to specify a number of markings used to identify packaging materials, with the aim to support the efficient collection, sorting, recycling and recovery after use. The collection and sorting of used packaging is a prerequisite for a successful recycling and recovery process.

Although several countries and regions have established marking systems for material identification, the absence of such systems in other countries and regions has created difficulties for individuals and organizations to properly identify packaging materials. Waste operators lacking sufficient means of mechanical sorting face problems in properly separating the used packaging materials, when specified identification markings are lacking. Moreover, packaging material markings are not always linked to collection symbols for packaging, which depend on the relevant packaging waste management systems.

The usefulness of markings for packaging materials is limited in countries and regions with established collection and sorting schemes, where the latest technologies are used to separate the packaging materials fractions.

This document contains a number of identification markings with their sorting and recycling systems which are successfully used in some countries and regions.

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Packaging and the environment — Marking for material identification

1 Scope

This document shows some examples of markings (words, numbers or symbols) for the identification of packaging materials. This document is applicable to all types of packaging in order to enable the identification of the materials used.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21067-1, *Packaging — Vocabulary — Part 1: General terms*

ISO 21067-2, *Packaging — Vocabulary — Part 2: Packaging and the environment terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21067-1 and ISO 21067-2 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://standards.iteh.ai/catalog/standards/sist/2930ef4d-d485-4ce0-95cc-4605c1d5010/iso-pr-18568>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Markings

4.1 Markings of packaging materials

Tables 1 to 6 outline some of the most commonly used markings of packaging materials categorized by country and/or region. Where necessary, a short explanation is given about the meaning and purpose of the markings outlined below.

Table 1 — Markings for paper as packaging material by country/region


Material	Country/ region	Marking	Application, purpose and meaning	Issuing organization Information source
Paper	China	 ISO 7000-1135	Applicable to all paper packaging	Indication: voluntary SAC, GB/T18455-2010
	Europe	PAP22 (paper) PAP 21 (fibreboard) PAP 20 (corrugated)	Applicable to packaging and material identification meaning	Indication: voluntary Decision 1997/129/EC, but the marking is mandatory when packaging material identification is adopted

Table 2 — Markings for aluminium as packaging material by country/region




Material	Country/ region	Marking	Application, purpose and meaning	Issuing organization Information source
Aluminium	China	 ISO/PRE TR 18568	Applicable to all aluminium packaging	Indication: voluntary SAC, GB/T18455-2010
	Europe	ALU 41 	Applicable to packaging and material identification meaning	Indication: voluntary Decision 1997/129/EC but the marking is mandatory when packaging material identification is adopted
			Applicable to packaging and material identification meaning	Indication: voluntary EN/TR 14311

Table 3 — Markings for glass as packaging material by country/region

Material	Country/ region	Marking	Application, purpose and meaning	Issuing organization Information source
Glass	Europe	GL70 (colourless) GL71 (green) GL72 (brown)	Applicable to packaging and material identification meaning	Indication: voluntary Decision 1997/129/EC but the marking is mandatory when packaging material identification is adopted

Table 4 — Markings for plastics as packaging material by country/region (including numbers and abbreviations of commonly used plastics-polymers for packaging)

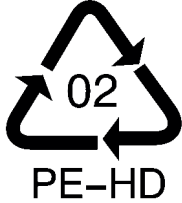


Material	Country/ region	Marking	Application, purpose and meaning	Issuing organization Information source
Plastics	China		Applicable to plastic packaging. This an example of the symbol. See Annex A for the numbers and abbreviations of commonly used plastics-polymers for packaging	Indication: voluntary SAC, GB/T18455-2010
	Europe	HDPE2	Applicable to packaging and material identification meaning. See Annex A for the numbers and abbreviations of commonly used plastics-polymers for packaging	Indication: voluntary Decision 1997/129/EC but the marking is mandatory when packaging material identification is adopted
			Applicable to plastic packaging and material identification meaning This an example of symbol. See Annex A for the numbers and abbreviations of commonly used plastics-polymers for packaging	Indication: voluntary EN-TR 14311
	USA		Applicable to plastic packaging. This an example of the symbol. See Annex A for the numbers and abbreviations of commonly used plastics-polymers for packaging	Indication: voluntary ASTM, ASTM D7611/D7611M -2013e1, but mandatory when material identification is adopted by state legislation in the USA

Table 5 — Markings for steel as packaging material by country/region

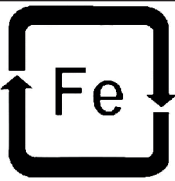

Material	Country/region	Marking	Application, purpose and meaning	Issuing organization Information source
Steel	China		Applicable to steel packaging.	Indication: voluntary SAC, GB/T18455-2010
	Europe	FE40	Applicable to packaging and material identification meaning	Indication: voluntary, Decision 1997/129/EC but the marking is mandatory when packaging material identification is adopted
			Applicable to packaging and material identification meaning	Indication: voluntary, EN/TR 14311

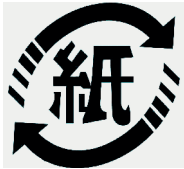




Table 6 — Markings for other packaging materials by country/region

Material	Country / region	Marking	Application, purpose and meaning	Issue organisation Information source
Wood	Europe	FOR 50 FOR 51 (cork)	Applicable to packaging and material identification meaning	Indication: voluntary Decision 1997/129/EC but the marking is mandatory when packaging material identification is adopted
Ceramics	Not designated	Not designated	Not designated	Not designated

4.2 Markings and symbols related to packaging

Table 7 shows examples of markings and symbols related to packaging without a material identification purpose. Such markings often point to a specific collection and sorting instruction or refer to a specific packaging waste management system in place. Others can refer to the recyclability of the packaging or packaging material concerned.

Table 7 — Markings and symbols related to packaging materials and/or products without a clear material identification purpose

Material	Country /Region	Marking	Application, purpose and meaning	Issuing organization Information source
Paper	Japan	 <p>Paper</p>	Containers/packaging Paper box, paper bag, wrapping paper, paper container for liquid, paper cup, other than next column corrugated cardboard and Paper carton for milk, beverage, alcohol, etc., with no aluminium layer. Paper made packaging component	Indication: Law for Promotion of Effective Utilization of Resources Recycling: Containers and Packaging Recycling Law
			Corrugated cardboard box	Indication: voluntary Cardboard Recycling Council Recycling: voluntary
		 <p>Paper, carton</p>	Paper carton for milk, beverages, alcohol, etc., with no aluminium layer	Indication: voluntary The Beverage Paper Container Recycling Council Recycling: voluntary
	Korea	 <p>Carton</p>  <p>Paper</p>	Applicable to all carton and paper packaging with some exceptions listed in Article 6 of Directive on Separate discharge Mark	Indication: Act on the promotion of saving and recycling of resources, Article 14 (Separate Discharge Mark)