SRI LANKA STANDARD 1560 : 2017

(ISO 11469:2016)

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GENERIC IDENTIFICATION AND MARKING OF PLASTICS PRODUCTS

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
GENERIC IDENTIFICATION AND MARKING OF PLASTICS PRODUCTS

SLS 1560 : 2017
(ISO 11469:2016)

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Sri Lanka.

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
GENERIC IDENTIFICATION AND MARKING OF PLASTICS PRODUCTS

NATIONAL FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Chemical and Polymer Technology and authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2017-05-04.

The text of the International Standard ISO 11469:2016 Plastics - Generic identification and marking of plastics products has been accepted for adoption as a Sri Lanka Standard. It specifies a system of uniform marking of plastic products, that have been fabricated from plastic materials.

This Sri Lanka standard is identical with ISO 11469:2016 Plastics - Generic identification and marking of plastics products published by the International Organization for Standardization (ISO).

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as suitable for publication, without deviation, as a Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka Standards. Attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to a particular Standards they should be interpreted as “Sri Lanka Standard”.

b) The comma has been used throughout as a decimal marker. In Sri Lanka Standards it is the current practice to use the full point at the base as the decimal marker.

c) Wherever page numbers are quoted, they are ISO page numbers.

Cross References

International Standard	Corresponding Sri Lanka Standard
ISO 472, Plastics - Vocabulary	SLS 616 Glossary of terms for plastics
ISO 1043-1, Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics	SLS 1559 Symbols and abbreviated terms for plastics Part 1: Basic polymers and their special characteristics
ISO 1043-2, Plastics - Symbols and abbreviated terms - Part 2: Fillers and reinforcing materials	SLS 1559 Symbols and abbreviated terms for plastics Part 2: Fillers and reinforcing materials
ISO 1043-3, Plastics - Symbols and abbreviated terms - Part 3: Plasticizers	SLS 1559 Symbols and abbreviated terms for plastics Part 3: Plasticizers
ISO 1043-4, Plastics - Symbols and abbreviated terms - Part 4: Flame retardants	SLS 1559 Symbols and abbreviated terms for plastics Part 4: Flame retardants

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SLS 1560:2017

INTERNATIONAL STANDARD

ISO 11469

Third edition
2016-10-01

Plastics — Generic identification and marking of plastics products

Plastiques — Identification générique et marquage des produits en matière plastique

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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 on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 1, *Terminology*.

This third edition cancels and replaces the second edition (ISO 11469:2000), which has been technically revised with the following changes:

— the definition of "plastics products" has been modified;

— the marking of recyclates has been included.

INTERNATIONAL STANDARD **ISO 11469:2016(E)**

Plastics — Generic identification and marking of plastics products

1 Scope

This International Standard specifies a system of uniform marking of products that have been fabricated from plastics materials. Provision for the process or processes to be used for marking is outside the scope of this International Standard.

NOTE 1 Precise details of the marking, e.g. the minimum size of the item to be marked, the size of the lettering, the appropriate location of the marking, are subject to agreement between the manufacturer and the user.

The marking system is intended to help identify plastics products for subsequent decisions concerning handling, waste recovery or disposal.

Generic identification of the plastics is provided by the symbols and abbreviated terms given in ISO 1043-1, ISO 1043-2, ISO 1043-3 and ISO 1043-4.

NOTE 2 If more detailed information for material identification is needed, additional marking of plastics products can be applied as defined in the appropriate product standard.

This International Standard is not intended to supplant, replace or in any way interfere with the requirements for labelling specified in product standards or legislation.

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 472, *Plastics — Vocabulary*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

ISO 1043-2, *Plastics — Symbols and abbreviated terms — Part 2: Fillers and reinforcing materials*

ISO 1043-3, *Plastics — Symbols and abbreviated terms — Part 3: Plasticizers*

ISO 1043-4, *Plastics — Symbols and abbreviated terms — Part 4: Flame retardants*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 472 and the following apply.

3.1
abbreviated term
term resulting from the omission of any part of a term while designating the same concept

[SOURCE: ISO 1043-1:2011, 3.1]

3.2
plastics products
articles or stocks shapes of plastic materials for any type of application

4 Symbols and abbreviated terms

The symbols and abbreviated terms given in ISO 1043-1, ISO 1043-2, ISO 1043-3 and ISO 1043-4 shall be used for this International Standard. If an appropriate symbol or abbreviated term is not included in ISO 1043 (all parts), such a symbol or abbreviated term from any available national or international standard may be used. Based on the rule of symbol "REC" for polymer in ISO 1043-1, a similar rule is applied to a product with two or more components when it is regarded as a single recyclate.

5 Requirements

5.1 Marking system

5.1.1 Marking of products

If plastics products are marked with the identification of the plastic materials, they shall be marked at some place on the surface with the appropriate standard symbol(s) or abbreviated term(s) set between the punctuation marks ">" and "<".

NOTE ">" and "<" are "greater than" and "less than" signs, respectively, often referred to in this context as reversed angled brackets.

5.1.2 Single-constituent products

Products made from a single polymer or copolymer shall be marked as specified in 5.1.1.

EXAMPLE 1 For acrylonitrile-butadiene-styrene polymer, use

>ABS<

EXAMPLE 2 If plastics recyclate is included with the minimum amount *x*, the symbol "(REC)" is an option.

>ABS<	When the specific claim regarding recyclate is not intended to be declared.
>ABS(REC)<	When the specific claim regarding recyclate is intended to be declared without specifying amount.
>ABS(RECx)<	When the specific claim regarding recyclate with specific amount is intended to be declared.

5.1.3 Polymer blends or alloys

Products of polymer blends or alloys shall be marked with the appropriate abbreviated terms for the constituent polymers, with the main component in first place followed by the other components in descending order according to their mass fractions, separated by one or more plus signs and set out as described in 5.1.1.

EXAMPLE 1 For an alloy of polycarbonate and acrylonitrile-butadiene-styrene in which the polycarbonate is the main polymer with the acrylonitrile-butadiene-styrene being dispersed therein, use

>PC+ABS<

EXAMPLE 2 If a specific claim of recycled content has to be declared, capital letters REC are followed by a number indicating the minimum percentage of 30 by mass

>PC+ABS(REC30)<

5.1.4 Compositions with special additives

5.1.4.1 Fillers or reinforcing agents

Compositions with a single filler or reinforcing material shall be marked with the abbreviated term for the polymer, followed by a hyphen, then the abbreviated term or symbol for the additive, in accordance with ISO 1043-2, with its percent by mass, arranged as shown in the examples and set out as described in 5.1.1.

EXAMPLE 1 For a polypropylene containing 30 % by mass of mineral powder, use

>PP-MD30<

EXAMPLE 2 For a high impact polystyrene containing 20 % by mass of glass fibre, use

>PS-HI-GF20<

For compositions with a mixture of fillers or reinforcing agents or both, the marking to show the presence of these additives shall be between parentheses (curved brackets) as shown in examples 3 and 4.

EXAMPLE 3 For a polyamide 66 containing a mixture of 15 % by mass of mineral powder and 25 % by mass of glass fibre, use

>PA66-(GF25+MD15)< or >PA66-(GF+MD)40<

EXAMPLE 4 For a thermoset moulding compound based on unsaturated polyester with 50 % by mass of mineral powder (MD) and 25 % by mass of glass fibre (GF), use

>UP-(MD50+GF25)< or >UP-(MD+GF)75<

5.1.4.2 Plasticizers

Compositions containing plasticizers shall be marked with the abbreviated term for the polymer followed by a hyphen, then the symbol “P” followed by the abbreviated term of the plasticizer in parentheses, as given in ISO 1043-3.

EXAMPLE For a PVC containing dibutyl phthalate as plasticizer, use

>PVC-P(DBP)<

5.1.4.3 Flame retardants

Compositions containing flame retardants shall be marked with the abbreviated term for the polymer followed by a hyphen, then the symbol “FR” followed by the code number of the flame retardant in parentheses, as given in ISO 1043-4.

EXAMPLE 1 For a polyamide 66 containing a mixture of 15 % by mass of mineral powder and 25 % by mass of glass fibre and, additionally, red phosphorus (52) as a flame retardant, use

>PA66-(GF25+MD15)FR(52)< or >PA66-(GF+MD)40FR(52)<

EXAMPLE 2 If a specific claim of recycled content has to be declared, capital letters REC are followed by a number indicating the minimum percentage of 30 by mass

>PA66-(GF25+MD15)FR(52)(REC30)< or >PA66-(GF+MD)40FR(52) (REC30)<

5.1.4.4 Products with two or more components difficult to separate

Products that comprise two or more components, some of which are not readily visible, shall be marked so that the primary visible material is identified first, by the system specified in 5.1.1, followed by identification of the other material(s) with the individual identification(s) separated by a comma. The main component by mass shall be identified by underlining.

EXAMPLE For a product made of three components, the visible one being a thin coating of poly(vinyl chloride) over a polyurethane containing an insert of acrylonitrile-butadiene-styrene that is the major component by mass, use

>PVC,PUR,ABS<

5.2 Method of marking

The marking shall be made

— during moulding by having the appropriate symbol included in the mould design,

— or by embossing,

— or by melt imprinting,

— or by other legible and indelible marking of the polymer.

NOTE 1 Precise details of the marking, e.g. the minimum size of the item to be marked, the size of the lettering, the appropriate location of the marking, are subject to agreement between the manufacturer and the user.

NOTE 2 If space for marking is not able to be secured, modification or omitting of marking is subject to agreement between the manufacturer and the user.

ICS 83.080.01

Price based on 4 pages

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science, Technology and Research.

The Principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote Standardization and quality control by educational, consultancy and research and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and Administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in return are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution Endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of Standardization as are of special interest to Sri Lanka.

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