Juli 2016

DEUTSCHE NORM

DIN EN ISO 14021

ICS 13.020.50

Ersatz für
DIN EN ISO 14021:2012-04

Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling) (ISO 14021:2016); German and English version EN ISO 14021:2016

DIN-Normenausschuss Grundlagen des Umweltschutzes (NAGUS)

Preisgruppe 22
www.din.de
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Nationales Vorwort

Dieses Dokument (EN ISO 14021:2016) wurde vom Unterkomitee SC 3 *Environmental labelling* (Sekretariat: SA, Australien) des Technischen Komitees ISO/TC 207 *Environmental management* (Sekretariat: SCC, Kanada) erarbeitet und als EN ISO 14021:2016 durch das Technische Komitee CEN/SS 26 Umweltmanagement übernommen, dessen Sekretariat vom CCMC gehalten wird.

Die nationalen Interessen bei der Erarbeitung wurden vom Arbeitsausschuss NA 172-00-03 AA *Ökobilanzen und umweltbezogene Kennzeichnung* des DIN-Normenausschusses NA 172 *Grundlagen des Umweltschutzes* (NAGUS) wahrgenommen.

Für die in diesem Dokument zitierten Internationalen Normen wird im Folgenden auf die entsprechenden Deutschen Normen hingewiesen:

ISO 5801	siehe	DIN EN ISO 5801
ISO 7000	siehe	DIN ISO 7000
ISO 7371	siehe	DIN EN ISO 7371
ISO 7827	siehe	DIN EN ISO 7827
ISO 8187	siehe	DIN EN 15502
ISO 8561	siehe	DIN EN ISO 8561
ISO 9004-1	siehe	DIN EN ISO 9004-1
ISO 9408	siehe	DIN EN ISO 9408
ISO 9439	siehe	DIN EN ISO 9439
ISO 10707	siehe	DIN EN ISO 10707
ISO 11469	siehe	DIN EN ISO 11469
ISO 14851	siehe	DIN EN ISO 14851
ISO 14852	siehe	DIN EN ISO 14852
ISO 14855	siehe	DIN EN ISO 14855
ISO 14020	siehe	DIN EN ISO 14020
ISO 14025	siehe	DIN EN ISO 14025
ISO 14040	siehe	DIN EN ISO 14040
ISO 14044	siehe	DIN EN ISO 14044
ISO/TS 14067	siehe	DIN CEN ISO/TS 14067
ISO/TR 14049	siehe	DIN-Fachbericht 107
IEC 60350	siehe	DIN EN 60350
IEC 60379	siehe	DIN EN 60379
IEC 60436	siehe	DIN EN 60436
IEC 60456	siehe	DIN EN 60456
IEC 60531	siehe	DIN EN 60531
IEC 60661	siehe	DIN EN 60661
IEC 60675	siehe	DIN EN 60675
IEC 60705	siehe	DIN EN 60705
IEC 61121	siehe	DIN EN 61121
IEC 61429	siehe	DIN EN 61429

Änderungen

Gegenüber DIN EN ISO 14021:2012-04 wurden folgende Änderungen vorgenommen:

a) Aktualisierung der Liste der normativen Verweisungen;

b) Aktualisierung von 7.17 mit Verweis auf die fertiggestellte ISO/TS 14067;

c) Aktualisierung und Anpassung der Literaturhinweise;

d) redaktionelle Änderungen.

Frühere Ausgaben

DIN EN ISO 14021: 2001-12, 2012-04

Nationaler Anhang NA
(informativ)

Literaturhinweise

[1] DIN-Fachbericht 107, *Umweltmanagement — Ökobilanz — Anwendungsbeispiele zu ISO 14041 zur Festlegung des Ziels und des Untersuchungsrahmens sowie zur Sachbilanz*

[2] DIN ISO 7000, *Grafische Symbole auf Einrichtungen — Index und Übersicht*

[3] DIN ISO 11469, *Kunststoffe — Sortenspezifische Identifizierung und Kennzeichnung von Kunststoff-Formteilen*

[4] DIN EN 28187, *Haushalts-Kühlgeräte; Kühl-Gefriergeräte — Eigenschaften und Prüfverfahren*

[5] DIN EN 45001, *Allgemeine Kriterien zum Betreiben von Prüflaboratorien*

[6] DIN EN 45002, *Allgemeine Kriterien zum Begutachten von Prüflaboratorien*

[7] DIN EN 60350, *Elektrische Herde, Kochmulden, Backöfen und Grillgeräte für den Hausgebrauch — Verfahren zur Messung der Gebrauchseigenschaften*

[8] DIN EN 60379, *Verfahren zum Messen der Gebrauchseigenschaften von elektrischen Warmwasserspeichern für den Hausgebrauch*

[9] DIN EN 60436, *Elektrische Geschirrspüler für den Hausgebrauch — Messverfahren für Gebrauchseigenschaften*

[10] DIN EN 60456, *Waschmaschinen für den Hausgebrauch — Verfahren zur Messung der Gebrauchseigenschaften*

[11] DIN EN 60531, *Elektrische Raumheizgeräte für den Hausgebrauch — Verfahren zur Messung der Gebrauchseigenschaften*

[12] DIN EN 60661, *Verfahren zur Messung der Gebrauchseigenschaften elektrischer Haushalt-Kaffeebereiter*

[13] DIN EN 60675, *Elektrische Haushalt-Direktheizgeräte — Prüfverfahren zur Bestimmung der Gebrauchseigenschaft*

[14] DIN EN 61121, *Wäschetrockner für den Hausgebrauch — Verfahren zur Messung der Gebrauchseigenschaften*

[15] DIN EN 61429, *Kennzeichnung von Akkumulatoren und Batterien mit dem internationalen Recycling-Bildzeichen ISO 7000-1135*

[16] DIN EN ISO 5801, *Industrieventilatoren — Leistungsmessung auf genormten Prüfständen*

[17] DIN EN ISO 7371, *Haushalt-Kühlgeräte — Kühlgeräte mit oder ohne Niedertemperaturfächern — Eigenschaften und Prüfverfahren*

[18] DIN EN ISO 7827, *Wasserbeschaffenheit — Bestimmung der vollständigen aeroben biologischen Abbaubarkeit organischer Stoffe in einem wässrigen Medium — Verfahren mittels Analyse des gelösten*

[19] DIN EN ISO 8561, *Haushalts-Frost-Free-Kühlgeräte — Kühlschränke, Kühl-Gefriergeräte, Gefriergeräte*
[20] *und Tiefkühlgeräte, gekühlt durch Zwangsumluft — Eigenschaften und Prüfverfahren*
[21]
DIN EN ISO 9004-1, *Qualitätsmanagement und Elemente eines Qualitätsmanagementsystems — Teil 1: Leitfaden*

DIN EN ISO 9408, *Wasserbeschaffenheit — Bestimmung der vollständigen aeroben biologischen Abbaubarkeit organischer Stoffe im wässrigen Medium über die Bestimmung des Sauerstoffbedarfs in*

[22] DIN EN ISO 9439, *Wasserbeschaffenheit — Bestimmung der vollständigen aeroben biologischen*
[23] *Abbaubarkeit organischer Stoffe im wässrigen Medium — Verfahren mit Kohlenstoffdioxid-Messung*

DIN EN ISO 10707, *Wasserbeschaffenheit — Bestimmung der vollständigen aeroben biologischen Abbaubarkeit organischer Stoffe in einem wässrigen Medium — Verfahren mittels Bestimmung des*

[24] DIN EN ISO 14020, *Umweltkennzeichnung und –deklarationen — Allgemeine Grundsätze*

[25] DIN EN ISO 14025, *Umweltkennzeichnung und –deklarationen — Typ III Umweltdeklarationen — Grundsätze und Verfahren*
[26]
DIN EN ISO 14040, *Umweltmanagement — Ökobilanz — Grundsätze und Rahmenbedingungen*
[27]
DIN EN ISO 14044, *Umweltmanagement — Ökobilanz — Anforderungen und Anleitungen*
[28]
DIN EN ISO 14851, *Bestimmung der vollständigen aeroben Bioabbaubarkeit von Kunststoff-Materialien in einem wässrigen Medium — Verfahren mittels Messung des Sauerstoffbedarfs in einem geschlossenen*

[29] DIN EN ISO 14852, *Bestimmung der vollständigen aeroben Bioabbaubarkeit von Kunststoff-Materialien in einem wässrigen Medium — Verfahren mittels Analyse des freigesetzten Kohlenstoffdioxides*

[30] DIN EN ISO 14855, *Bestimmung der vollständigen aeroben Bioabbaubarkeit und Zersetzung von Kunststoff-Materialien unter den Bedingungen kontrollierter Kompostierung — Verfahren mittels*

[31] DIN CEN ISO/TS 14067, *Treibhausgase — Carbon Footprint von Produkten — Anforderungen an und Leitlinien für Quantifizierung und Kommunikation*

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EUROPEAN STANDARD

EN ISO 14021

April 2016/April 2016

ICS 13.020.50

Ersatz für / Supersedes für EN ISO 14021:2001

Umweltkennzeichnungen und -deklarationen - Umweltbezogene Anbietererklärungen (Umweltkennzeichnung Typ II) (ISO 14021:2016)

Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) (ISO 14021:2016)

This European Standard was approved by CEN on 20 January 2016.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Ref. Nr./Ref. No. EN ISO 14021:2016 D/E

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European foreword

This document (EN ISO 14021:2016) has been prepared by Technical Committee ISO/TC 207 “Environmental management”.

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 October 2016 and conflicting national standards shall be withdrawn at the latest by October 2016.

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 14021:2001.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom, Italy, Latvia, Lithuania, Luxembourg.

Endorsement notice

The text of ISO 14021:2016 has been approved by CEN as EN ISO 14021:2016 without any modification.

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword – Supplementary information.

The committee responsible for this document is Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 3, *Environmental labelling.*

This second edition cancels and replaces the first edition (ISO 14021:1999), of which it constitutes a minor revision. It also incorporates the Amendment ISO 14021:1999/Amd 1:2011.

Introduction

The proliferation of environmental claims has created a need for environmental labelling standards which require that consideration be given to all relevant aspects of the life cycle of the product when such claims are developed.

Self-declared environmental claims may be made by manufacturers, importers, distributors, retailers or anyone else likely to benefit from such claims. Environmental claims made in regard to products may take the form of statements, symbols or graphics on product or package labels, or in product literature, technical bulletins, advertising, publicity, telemarketing, as well as digital or electronic media, such as the Internet.

In self-declared environmental claims, the assurance of reliability is essential. It is important that verification is properly conducted to avoid negative market effects such as trade barriers or unfair competition, which can arise from unreliable and deceptive environmental claims. The evaluation methodology used by those who make environmental claims should be clear, transparent, scientifically sound and documented so that those who purchase or may potentially purchase products can be ensured of the validity of the claims.

1 Scope

This International Standard specifies requirements for self-declared environmental claims, including statements, symbols and graphics, regarding products. It further describes selected terms commonly used in environmental claims and gives qualifications for their use. This International Standard also describes a general evaluation and verification methodology for self-declared environmental claims and specific evaluation and verification methods for the selected claims in this International Standard.

This International Standard does not preclude, override, or in any way change, legally required environmental information, claims or labelling, or any other applicable legal requirements.

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 7000, *Graphic symbols for use on equipment — registered symons*

ISO 14020, *Environmental labels and declarations - General principles*

ISO/TS 14067, *Greenhouse gases — Carbon footprint of products - Requirements and guidelines for qualification and communication*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 General terms

3.1.1
biomass

material of biological origin, excluding material embedded in geological formations or transformed to fossilised material and excluding peat

Note 1 to entry:
This includes organic material (both living and dead) from above and below ground, e.g. trees, crops, grasses, tree litter, algae, animals and waste of biological origin, e.g. manure.

3.1.2
co-product

two or more products from the same unit process

[SOURCE: ISO 14040:2006, 3.10, modified]

3.1.3 environmental
aspect

element of an organization's activities or products that can interact with the environment

3.1.4
environmental claim

statement, symbol or graphic that indicates an environmental aspect of a product, a component or packaging

Note 1 to entry:
An environmental claim may be
made on product or packaging labels, through product literature, technical bulletins, advertising, publicity, telemarketing, as well as through digital or electronic media such as the Internet.

3.1.5
environmental claim verification

confirmation of the validity of an environmental claim using specific predetermined criteria and procedures with assurance of data reliability

3.1.6
environmental impact
change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities or products

3.1.7

explanatory statement
explanation which is needed or given so that an environmental claim can be properly understood by a purchaser, potential purchaser or user of the product

3.1.8
functional unit
quantified performance of a product system for use as a reference unit in a life cycle assessment study

[SOURCE: ISO 14040:2006, 3.20, modified]

3.1.9

greenhouse gas
GHG
gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds

Note 1 to entry:
GHGs include, among others, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

Note 2 to entry: A list of recognized GHGs is provided by IPCC, *Climate Change 2007: The Physical Science Basis* , Chapter 2, Table 2.14.

3.1.10
life cycle

consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal

[SOURCE: ISO 14040:2006, 3.1]

3.1.11
material identification
words, numbers or symbols used to designate composition of components of a product or packaging

Note 1 to entry: A material identification symbol is not considered to be an environmental claim.

Note 2 to entry:

References [10] to [13] in the Bibliography give examples of International Standards, national standards and industry publications dealing with material identification symbols.

3.1.12
offsetting

mechanism for compensating for the carbon footprint of a product through the prevention of the release of, reduction in, or removal of, an equivalent amount of GHG emissions in a process outside the boundary of the product system

EXAMPLE External investment in renewable energy technologies; energy efficiency measures; afforrestation/reforestation.

3.1.13
packaging

material that is used to protect or contain a product during transportation, storage, marketing or use

Note 1 to entry: For the purposes of this International Standard, the term “packaging” also includes any item that is physically attached to, or included with, a product or its container for the purpose of marketing the product or communicating information about the product.

3.1.14
product

any goods or service

[SOURCE: ISO 14040:2006, 3.9, modified]

3.1.15

qualified environmental claim

environmental claim which is accompanied by an explanatory statement that describes the limits of the claim

3.1.16
self-declared environmental claim
environmental claim that is made, without by independent third-party certification by manufacturers, importers, distributors, retailers or anyone else likely to benefit from such a claim

3.1.17
sustainable development
development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Note to entry: Sustainable development is about integrating the goals of a high quality of life, health and prosperity with social justice and maintaining the earth's capacity to support life in all its diversity. These social, economic and environmental goals are interdependent and mutually reinforcing. Sustainable development can be treated as a way of expressing the broader expectations of society as a whole.

[ISO 26000:2010, 2.23]

3.1.18
upgradability
characteristic of a product that allows its modules or parts to be separately upgraded or replaced without having to replace the entire product

3.1.19
waste
anything for which the generator or holder has no further use and which is discarded or is released to the environment

3.2 Selected terms commonly used in self-declared environmental claims

Requirements for the usage of the terms listed below, in the context of making an environmental claim, are given in Clause 7.

Compostable	7.2.1
Degradable	7.3.1
Designed for disassembly	7.4.1
Extended life product	7.5.1
Recovered energy	7.6.1
Recyclable	7.7.1
Recycled content	7.8.1.1 a)
Pre-consumer material	7.8.1.1 a) 1)
Post-consumer material	7.8.1.1 a) 2)
Recycled material	7.8.1.1 b)
Recovered [reclaimed] material	7.8.1.1 c)
Reduced energy consumption	7.9.1
Reduced resource use	7.10.1
Reduced water consumption	7.11.1
Reusable	7.12.1.1
Refillable	7.12.1.2
Waste reduction	7.13.1

4 Objective of self-declared environmental claims

The overall goal of environmental labels and declarations is, through communication of verifiable and accurate information, that is not misleading, on environmental aspects of products and services, to encourage the demand for and supply of those products and services that cause less stress on the environment, stimulating the potential for market-driven continuous environmental improvement.

The objective of this International Standard is to harmonize the use of self-declared environmental claims. It is anticipated that benefits will be:

a) accurate and verifiable environmental claims that are not misleading;

b) increased potential for market forces to stimulate environmental improvements in production, processes and products;

c) prevention or minimization of unwarranted claims;

d) reduction in marketplace confusion;

e) facilitation of international trade; and

f) increased opportunities for purchasers, potential purchasers and users of the product to make more informed choices.

5 Requirements applying to all self-declared environmental claims

5.1 General

The requirements set out in Clause 5 shall apply to any self-declared environmental claim made by a claimant, whether it is one of the selected claims referred to in Clause 7 or any other environmental claim.

5.2 Relationship to ISO 14020

In addition to the requirements of this International Standard, the principles set out in ISO 14020 shall apply. Where this International Standard provides more specific requirements than ISO 14020, such specific requirements shall be followed.

5.3 Vague or non-specific claims

An environmental claim that is vague or non-specific or which broadly implies that a product is environmentally beneficial or environmentally benign shall not be used. Therefore, environmental safe", claims such as "environmentally safe", environmentally friendly", "earth friendly", "non-polluting", "green", "nature's friend" and "ozone friendly" shall not be used.

NOTE This list is illustrative and not exhaustive.

5.4 Claims of "... free"

An environmental claim of "... free" shall only be made when the level of the specified substance is no more than that which would be found as an acknowledged trace contaminant or background level.
NOTE

Attention is drawn to the requirements of 5.7 k) and 5.7 p).

5.5 Claims of sustainability

The concepts involved in sustainability are highly complex and still under study. At this time there are no definitive methods for measuring sustainability or confirming its accomplishment. Therefore, no claim of achieving sustainability shall be made.

5.6 Use of explanatory statements

Self-declared environmental claims shall be accompanied by an explanatory statement if the claim alone is likely to result in misunderstanding. An environmental claim shall only be made without an explanatory statement if it is valid in all foreseeable circumstances with no qualifications.

5.7 Specific requirements

Self-declared environmental claims and any all requirements in 5.7. Such claims, including any explanatory statement:

a) shall be accurate and not misleading;

b) shall be substantiated and verified; shall be

c) relevant to that particular product, and used only in an appropriate context or setting;

d) shall be presented in a manner that clearly indicates whether the claim applies to the complete product, or only to a product component or packaging, or to an element of a service;

e) shall be specific as to the environmental aspect or environmental improvement which is claimed;

f) shall not be restarted using different terminology to imply multiple benefits for a single environmental change;

g) shall be unlikely to result in misinterpretation;

h) shall be true not only in relation to the final product but also shall take into consideration all relevant aspects of the product life cycle in order to identify the potential for one impact to be increased in the process of decreasing another;

NOTE This does not necessarily mean that a life cycle assessment should be undertaken.

i) shall be presented in a manner which does not imply that the product is endorsed or certified by an independent third-party organization when it is not;

j) shall not, either directly or by implication, suggest an environmental improvement which does not exist, nor shall it exaggerate the environmental aspect of the product to which the claim relates;

k) shall not be made if, despite the claim being literally true, it is likely to be misinterpreted by purchasers or is misleading through the omission of relevant facts;

l) shall only relate to an environmental aspect that either exists or is likely to be realized, during the life of the product;

m) shall be presented in a manner that clearly indicates that the environmental claim and explanatory statement should be read together. The explanatory statement shall be of reasonable size and in reasonable proximity to the environmental claim it accompanies;

n) shall, if a comparative assertion of environmental superiority or improvement is made, be specific and make clear the basis for the comparison. In particular, the environmental claim shall be relevant in terms of how recently any improvement was made;

o) shall, if based on a pre-existing but previously undisclosed aspect, be presented in a manner that does not lead purchases, potential purchasers and users of the product to believe that the claim is based on a recent product or process modification;

p) shall not be made where they are based on the absence of ingredients or features which have never been associated with the product category;

q) shall be reassessed and updated as necessary to reflect changes in technology, competitive products or other circumstances that could alter the accuracy of the claim; and

r) shall be relevant to the area where the corresponding environmental impact occurs.

NOTE

A process-related claim can be made anywhere, so long as the environmental impact occurs in the area where the production process is located. The size of the area will be determined by the nature of the impact.

5.8 Use of symbols to make environmental claims

5.8.1 When a self-declared environmental claim is made, the use of a symbol is optional.

5.8.2 Symbols used to make an environmental claim should be simple, easily reproducible and capable of being positioned and sized to suit the product to which the symbol is likely to be applied.

5.8.3 Symbols used for one type of environmental claim should be easily distinguishable from other symbols, including symbols for other environmental claims.

5.8.4 A symbol used to express implementation of an environmental management system shall not be used in such a way that it could be misunderstood as an environmental symbol indicating the environmental aspects of a product.

5.8.5 Natural objects shall be used only if there is a direct and verifiable link between the object and the benefit claimed.

NOTE

There are many advantages to be gained by the use of the same symbol to denote the same environmental aspect on competing products. As new symbols are developed, claimants are encouraged to adopt a consistent approach and not to discourage the use of the same symbol to denote the same environmental aspect by others. In selection of a new symbol, due consideration should be given so as not to violate the intellectual property rights (e.g. registered designs) of third parties.

5.9 Other information or claims

5.9.1 Words, numbers or symbols may be used in addition to environmental symbols to communicate information such as material identification, disposal instructions or hazard warnings.

5.9.2 Words, numbers or symbols used for non-environmental claim purposes shall not be used in a manner that is likely to be misunderstood as making an environmental claim.

5.9.3 An environmental symbol as described in 5.10 shall not be modified to relate the symbol to a specific brand, company or corporate position.

5.10 Specific symbols

5.10.1 General

The selection of specific symbols for this International Standard is based on their existing wide use or recognition. This should not be taken to imply that environmental claims represented by these symbols are superior to other environmental claims. Only the Mobius loop is included at present. Other specific symbols which are not provided for in this International Standard will be introduced at an appropriate time.

5.10.2 The Mobius loop

5.10.2.1 The Mobius loop is a symbol in the shape of three twisted chasing arrows forming a triangle. Whenever it is used to make an environmental claim, the design shall meet the graphical requirements for ISO 7000-1135. There should, however, be enough contrast so that the symbol is clear and distinguishable. Some examples of the form of the Mobius loop are provided in Figure 1. Clause 7 provides detailed requirements concerning the use and applicability of the Mobius loop.

5.10.2.2 The Mobius loop may apply to the product or the packaging. If there is any potential for confusion about whether it applies to the product or the packaging, the symbol shall be accompanied by an explanatory statement.

5.10.2.3 If a symbol is used for claims of recyclable or recycled content, then that symbol shall be the Mobius loop subject to the requirements of 7.7 and 7.8.

5.10.2.4 The Mobius loop shall only be used for claims of recycled content and recyclable, as described in 7.7 and 7.8.

6 Evaluation and claim verification requirements

6.1 Responsibilities of the claimant

The claimant shall be responsible for evaluation and provision of data necessary for the verification of self-declared environmental claims.

6.2 Reliability of evaluation methodology

6.2.1 Prior to making the claim, evaluation measures shall be implemented to achieve reliable and reproducible results necessary to verify the claim.

6.2.2 The evaluation shall be fully documented and the documentation retained by the claimant for the purpose of the information disclosure referred to in 6.5.2. This shall be for the period that the product is on the market, and for a reasonable period thereafter, taking into account the life of the product.

NOTE For guidance on reproducibility and reliability, see References [10] to [13] in the Bibliography.

6.3 Evaluation of comparative claims

6.3.1 Comparative claims shall be evaluated against one or more of the following:

a) an organization's own prior process;

b) an organization's own prior product;

c) another organization's process; or

d) another organization's product.

The comparison shall only be made:

— using a published standard or recognized test method (as set out in 6.4); and

— against comparable products serving similar functions, supplied by the same or another producer, currently or recently in the same marketplace.

6.3.2 Comparative claims involving the environmental aspects of the product's life cycle shall be:

a) quantified and calculated using the same units of measurement;

b) based on the same functional unit; and

c) calculated over an appropriate time interval, typically 12 months.

6.3.3 Comparative claims may be based on:

a) percentages, in which case they should be expressed as absolute differences; or

NOTE The following example is provided to clarify how relative measurements could be handled: For a change from 10 % to 15 % recycled content, the absolute difference is 15 % – 10 % = 5 %, in which case, a claim of an additional 5 % recycled content could be made; however, a claim of 50 % increase, while accurate, could be misleading.

b) absolute (measured) values, in which case they should be expressed as relative improvements.

NOTE The following example is provided to clarify how absolute measurements could be handled

For an improvement that results in a product lasting 15 months instead of the previous 10 months, the relative difference is

$$\frac{15\ \text{months} - 10\ \text{months}}{10\ \text{months}} \times 100 = 50\ \%$$

in which case, a claim of 50 % longer life could be made. If one of the values is nil, the absolute difference should be used.

6.3.4 As there is a high risk of confusing an absolute claim with a relative claim, the claim should be worded to be clear that it is a claim of absolute difference and not a claim of relative difference.

6.3.5 Improvements related to a product and its packaging shall be stated separately and shall not be aggregated.

6.4 Selection of methods

Methods for evaluation and claim verification shall follow, in order of preference, International Standards, recogned standards that have international acceptability (these may include regional or national standards) or industry or trade methods which have been subjected to peer review. If there are no methods already in existence, a claimant may develop a method, provided it meets the other requirements of Clause 6 and is available for peer review.

NOTE
Some typical International and national standards, as well as some specific industry methods relevant to some selected claims are listed in the Bibliography (References [14] to [68]).

6.5 Access to information

6.5.1 A self-declared environmental claim shall only be considered verifiable if such verification can be made without access to confidential business information. Claims shall not be made if they can only be verified by confidential business information.

6.5.2 The claimant may voluntarily release to the public the information necessary for verification of an environmental claim. If not, the information necessary to verify the claim shall be disclosed, upon request, at a reasonable cost (to cover administration), time and place, to any person seeking to verify the claim.

6.5.3 The minimum information required to be documented and retained in accordance with 6.2 shall include the following:

a) identification of the standard or method used;

b) documentary evidence, if verification of the claim cannot be made by testing the finished product;

c) test results, where these are necessary for claim verification;

d) if testing is carried out by an independent party, the name and address of the indipendent party;

e) evidence that the claim conforms with the requirements of 5.7 h) and 5.7 r);

f) if the self-declared environmental claim involves a comparison with other products, then a description of the method used, the results of any tests of those products, and any assumptions made shall be clearly stated;

NOTE Further requirements for comparative claims are set out in 5.7.

g) evidence that the claimant's evaluation gives assurance of the continuing accuracy of the self-declared environmental claim during the period over which the product is on the market, and for a reasonable period thereafter, taking into account the life of the product.

7 Specific requirements for selected claims

7.1 General

7.1.1 Clause 7 provides interpretation and usage qualifications for selected terms commonly used in self-declared environmental claims. The onus on a claimant to follow the principles set out in this clause shall not be diminished by substituting like terms. Clause 7 supplements, but does not replace, the requirements in other clauses of this International Standard.

7.1.2

It is not intended to imply that the claims in Clause 7 are superior to other environmental claims. The principal reason for their selection has been their current or potential wide use, not their environmental importance. These claims can be applied, when relevant, to the stages of manufacturing and distribution, product usage and product recovery and disposal.

NOTE The terms dealt with in Clause 7 have been arranged in alphabetical order (in English), as set out below:

7.2 Compostable
7.3 Degradable
7.4 Designed for disassembly
7.5 Extended life product
7.6 Recovered energy
7.7 Recyclable
7.8 Recycled content
7.9 Reduced energy consumption
7.10 Reduced resource use
7.11 Reduced water consumption
7.12 Reusable and refillable
7.13 Waste reduction

7.2 Compostable

7.2.1 Usage of term

A characteristic of a product, packaging or associated component that allows it to biodegrade, generating a relatively homogeneous and stable humus-like substance.

7.2.2 Qualifications

7.2.2.1 A compostability claim shall not be made for a product or packaging or a component of a product or packaging that:

a) negatively affects the overall value of the compost as a soil amendment;

b) releases substances in concentrations harmful to the environment at any point during decomposition or subsequent use; or

c) significantly reduces the rate of composting in those systems in which the product or component is likely to be composted.

7.2.2.2 All compostability claims shall be clearly qualified as follows.

a) The claim shall specify whether the type of composting facility or process in which the identified component is compostable is a home-composting facility or an on-site or central composting facility, unless the product is compostable in all types of composting facilities, in which case no qualification is necessary.

b) If the entire product is not compostable, the claim shall identify specifically which components are compostable. If the user of the product is required to separate those components, clear direction on how to do so shall be provided.

c) If problems or risks are associated with introducing the product into either a home-composting facility or on-site or central composting facilities, then the claim shall identify which of these types of facility are capable of composting the product.

7.2.2.3 If a compostability claim refers to home composting, the following additional requirements shall apply.

a) If a significant preparation or product modification is necessary to ensure satisfactory compostability, or if significant additional treatment of the finished compost is required as a direct result of the composting of the product or component, compostability claim shall not be made.

b) If home composting of the product or component would require materials, equipment (other than a composting unit) or specialized skills that are unlikely to be available in most households, the claim of home compostability shall not be made.

7.2.2.4

If a compostability claim is dependent on processes or facilities other than home composters, then the following shall apply.

a) Such facilities for the purpose of composting the product or packaging shall be conveniently available to a reasonable proportion of purchasers, potential purchasers and users where the packaging or product is sold.

b) If such facilities are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product, explanatory statements shall be used which are adequate to convey the limited availability of these facilities.

c) General qualifications, such as “Compostable where facilities exist”, which do not convey the limited availability of facilities are not adequate.

7.2.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6.

7.3 Degradable

7.3.1 Usage of term

A characteristic of a product or packaging that, with respect to specific conditions, allows it to break down to a specific extent within a given time.

NOTE Degradability is a function of susceptibility to changes in chemical structure. Consequent changes in physical and mechanical properties lead to the disintegration of the product or material.

7.3.2 Qualifications

7.3.2.1 The following qualifications refer to all types of degradation, including for instance biodegradation and photodegradation.

a) Claims of degradability shall only be made in relation to a specific test method that includes maximum level of degradation and test duration, and shall be relevant to circumstances in which the product or packaging is likely to be disposed.

b) A degradable claim shall not be made for a product or packaging, or component of a product or packaging, that releases substances in concentrations harmful to the environment.

7.3.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6.

7.4 Designed for disassembly

7.4.1 Usage of term

A characteristic of a product's design that enables the product to be taken apart at the end of its useful life in such a way that allows components and parts to be reused, recycled, recovered for energy or, in some other way, diverted from the waste stream.

7.4.2 Qualifications

7.4.2.1 A claim of designed for disassembly shall be accompanied by an explanatory statement that specifies the components or parts to be reused, recycled, recovered for energy or, in some other way, diverted from the waste stream.

7.4.2.2 If a claim of designed for disassembly accompanies another claim, such as a claim of recyclable, the relevant requirements applying to the other claim shall also be followed.

7.4.2.3 All claims that a product is designed for disassembly shall specify whether the disassembly is to be done by the purchaser or user, or whether it is to be returned for disassembly by specialists.

7.4.2.4 If a special process is required to disassemble the product, then the following shall apply.

a) Collection or drop-off facilities shall be available to a reasonable proportion of purchasers, potential purchasers and users of the product where the product is sold.

b) If such facilities are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product, explanatory statements shall be used which are adequate to convey the limited availability of these facilities.

c) General qualifications, such as “Can be disassembled where facilities exist”, which do not convey the limited availability of facilities are not adequate.

7.4.2.5 Products designed for disassembly by the purchaser, potential purchaser or user of the product shall have accompanying information on disassembly tools and methods used.

7.4.2.6 A claim that a product is designed to be disassembled by the purchaser, potential purchaser or user of the product shall only be made if:

a) specialized tools or expertise are not required; and

b) clear information on the method of disassembly and reuse, recycling, recovery or disposal of the parts is provided.

NOTE Further guidance on provision of consumer information is given in ISO/IEC Guide 14.

7.4.2.7

Products designed for disassembly by specialists shall have accompanying information on equipment and facilities needed to carry out the disassembly.

7.4.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6.

7.5 Extended life product

7.5.1 Usage of term

A product designed to provide prolonged use, based on either improved durability or an upgradability feature, that results in reduced resource use or reduced waste.

7.5.2 Qualifications

7.5.2.1 All claims regarding extended life shall be qualified. As extended life claims are comparative claims, the requirements of 6.3 shall be met.

7.5.2.2 Where a claim of extended life is based upon an upgradability feature, specific information on how to achieve the required upgrade shall be provided. An infrastructure to enable upgrading shall be available.

7.5.2.3 Extended life claims that are based on the improved durability of the product shall state the extended life period or the percentage improvement and the measured value (e.g. repetitive number of operations before breakage) or reasoning that supports the claim.

7.5.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, the average extended life period shall be measured in accordance with appropriate standards and statistical methods, as outlined in 6.4.

7.6 Recovered energy

7.6.1 Usage of term

A characteristic of a product that has been made using energy recovered from material or energy that would have been disposed of as waste but instead has been collected through managed processes.

NOTE In this context, the product can be the recovered energy itself.

7.6.2 Qualifications

In order for a claim to be made that a product has been manufactured using recovered energy, the energy used shall meet the following qualifications and shall be evaluated in accordance with 7.6.3.

a) Energy recovery from waste materials refers to the collection and conversion of waste material into useful energy. This includes any collection and conversion of waste materials from industry, home, business or public service facilities.

b) Before a claim of recovered energy can be made, the claimant shall ensure that adverse effects on the environment resulting from this activity are managed and controlled.

c) The type and quantity of waste that has been used for recovery shall be stated.

7.6.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, evaluation of recovered energy shall be calculated using the following method:

a) The claim shall only be made if $R - E > 0$.

b) A claim of net recovered energy shall be expressed as follows:

Net recovered energy (%)

$$\frac{(R - E)}{(R-E)+P} \times 100$$

where

P is the amount of energy from primary sources used in the manufacturing process to produce the product;

R is the amount of energy resulting from the energy recovery process;

E is the amount of energy from primary sources used in the energy recovery the process to recover or extract recovered energy.

7.7 Recyclable

7.7.1 Usage of term

A characteristic of a product, packaging or associated component that can be diverted from the waste stream through available processes and programmes and can be collected, processed and returned to use in the form of raw materials or products.

NOTE Material recycling is only one of a number of waste-prevention strategies. The choice of a particular strategy will depend on circumstances and account should be taken of differing regional impacts in making this choice.

7.7.2 Qualifications

If collection or drop-off facilities for the purpose of recycling the product or packaging are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product in the area where the product is sold, then the following shall apply.

a) A qualified claim of recyclability shall be used.

b) The qualified claim shall adequately convey the limited availability of collection facilities.

c) Generalized qualifications, such as “Recyclable where facilities exist”, which do not convey the limited availability of collection facilities are not adequate.

7.7.3 Use of a symbol

7.7.3.1 When a recyclable claim is made, the use of a symbol is optional.

7.7.3.2 If a symbol is used for a recyclable claim, it shall be the Mobius loop, as described in 5.10.2.

7.7.3.3 The Mobius loop, as described in 5.10.2, without a percentage value shall be taken to be a recyclable claim.

7.7.3.4 The use of an explanatory statement is optional, subject to 5.6.

7.7.3.5 An explanatory statement may include material identification.

7.7.4 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. The information referred to in 6.5 shall include evidence of the following.

a) The collection, sorting and delivery systems to transfer the materials from the source to the recycling facility are conveniently available to a reasonable proportion of the purchasers, potential purchasers and users of the product.

b) The recycling facilities are available to accommodate the collected materials.

c) The product for which the claim is made is being collected and recycled.

7.8 Recycled content

7.8.1 Usage of terms

7.8.1.1 Recycled content and its associated terms shall be interpreted as follows:

a) Recycled content

Proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of terms.

1) Pre-consumer material

Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

2) Post-consumer material

Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

b) Recycled material

Material that has been reprocessed from recovered [reclaimed] material by means of a manufacturing process and made into a final product or into a component for incorporation into a product.

c) Recovered [reclaimed] material

Material that would have otherwise been disposed of as waste or used for energy recovery, but has instead been collected and recovered [reclaimed] as a material input, in lieu of new primary material, for a recycling or a manufacturing process.

NOTE 1 A diagrammatic representation of a material recycling system is given in Annex A.

NOTE 2 For the purposes of this International Standard, the expressions “recovered material” and “reclaimed material” are treated as synonyms; however, it is recognized that, in some countries, one or other of these expressions may be preferred for this application.

7.8.1.2 Material recycling is only one of a number of waste-prevention strategies. The choice of a particular strategy will depend on circumstances and account should be taken of differing regional impacts in making this choice. Consideration shall be given to the fact that a higher percentage of recycled content does not necessarily imply a lower environmental impact. Because of this, the recycled content claim, in particular, should be used with discretion.

NOTE Attention is drawn to the requirements of 5.7 h).

7.8.2 Qualifications

7.8.2.1 Where a claim of recycled content is made, the percentage of recycled material shall be stated.

7.8.2.2 The percentage recycled content for products and packaging shall be separately stated and shall not be aggregated.

7.8.3 Use of a symbol

7.8.3.1 When a claim of recycled content is made, the use of a symbol is optional.

7.8.3.2 If a symbol is used for a recycled content claim, it shall be the Mobius loop accompanied by a percentage value stated as "X %", where X is the recycled content expressed as a whole number calculated in accordance with 7.8.4. The percentage value shall be located either inside the Mobius loop or outside and immediately adjacent to the Mobius loop. Examples of acceptable locations of the percentage value are shown in Figure 2. The Mobius loop with a percentage value, stated as "X %", shall be taken to be a recycled content claim.

7.8.3.3 If the percentage recycled content is variable, it may be expressed with statements such as "at least *X* %", or "greater than *X* %".

7.8.3.4 The use of an explanatory statement is optional, subject to 5.6.

7.8.3.5 Where a symbol is used it may be accompanied by material identification.

Figure 2 — Examples of acceptable locations of percentage value when using the Mobius loop to make claims about recycled content

7.8.4 Evaluation methodology

7.8.4.1 Evaluation shall be undertaken accordance with Clause 6. In addition, recycled content shall be expressed quantitatively as a percentage, calculated as shown below. As there are no methods available for directly measuring recycled content in a product or packaging, the mass of material obtained from the recycling process, after accounting for losses and other diversions, shall be used.

$$X(\%) = \frac{A}{P} \times 100$$

where

X is the recycled content, expressed as a percentage;

A is the mass of recycled material;

P is the mass of product.

NOTE For further clarification on the calculation of recycled material, reference may be made to Annex A.

7.8.4.2 Verification of the source and quantity of the recycled materials may be carried out through the use of purchasing documentation and other available records.

7.9 Reduced energy consumption

7.9.1 Usage of term

Reduction in the amount of energy associated with the use of a product performing the function for which it was conceived when compared with the energy used by other products performing an equivalent function.

NOTE Claims of reduced energy consumption are commonly expressed as energy-efficient, energy-conserving or energy-saving.

7.9.2 Qualifications

7.9.2.1 All claims regarding reduced energy consumption shall be qualified. As reduced energy consumption is a comparative claim, the requirements of 6.3 shall be met.

7.9.2.2 Claims for reduced energy consumption shall be based on the reduction in energy consumption in the use of products and delivery of services. It shall not include reduction of energy in the processes used to manufacture the product.

7.9.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, reduced energy consumption shall be measured in accordance with established standards and methods for each product, and the average value should be calculated by statistical processing. The selection of methods shall be in accordance with 6.4.

7.10 Reduced resource use

7.10.1 Usage of term

A reduction in the amount of material, energy or water used to produce or distribute a product or packaging or specified associated component.

NOTE Claims of reduced resource use relating to energy and water usage in the product usage phase of the life cycle are dealt with in 7.9 and 7.11.

7.10.2 Qualifications

7.10.2.1 Resources include energy and water resources in addition to raw materials.

7.10.2.2 All claims regarding reduced resource use shall be qualified.

7.10.2.3 Reductions in resource use for products and packaging shall be separately stated and shall not be aggregated.

7.10.2.4 Reduced resource use claims shall be expressed in terms of reduction percentage (%). As reduced resource use is a comparative claim, the requirements of 6.3 shall be met.

7.10.2.5 If reduced resource use claims are made, the type of resource shall be stated in an explanatory statement.

7.10.2.6 If an increase in consumption of other resources occurs as a result of the claimed reduction of resource use, the increased resource and percentage shall be stated in an explanatory statement.

7.10.2.7 When a resource reduction has been achieved, for an initial 12-month period, a claim may be based on an estimated calculation of reduced resource based on the design or distribution of products or production process.

7.10.2.8 A change in resource use shall be expressed separately for each resource.

7.10.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, except as allowed for in 7.10.2.7, the consumed resource per production unit shall be obtained by dividing the gross input of resources during a 12-month period by the gross production in the same 12-month period.

Reduced resource use rate percentage (U %) shall be obtained by the following formula.

$$U(\%) = \frac{(I - N)}{(I)} \times 100$$

where

U is the reduced resource use per production unit, expressed as a percentage;

I is the initial resource use, expressed as consumed resource per production unit;

N is the new resource use, expressed as consumed resource per production unit.

7.11 Reduced water consumption

7.11.1 Usage of term

Reduction in the consumption of water associated with the use of a product performing the function for which it was conceived when compared with the amount of water used by other products performing an equivalent function.

NOTE Claims of reduced water usage are commonly expressed as water-efficient, water-conserving or water-saving.

7.11.2 Qualifications

7.11.2.1 All claims regarding water efficiency or reduction shall be qualified. As reduced water consumption is a comparative claim, the requirements of 6.3 shall be met.

7.11.2.2

Claims for reduced water consumption shall be based on the reduction in water consumption in the use of the product. It shall not include reduction of water in manufacturing processes of the product.

7.11.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, water consumption shall be measured in accordance with established standards and methods for each product, and the average value should be calculated by statistical processing. The selection of methods shall be in accordance with 6.4.

7.12 Reusable and refillable

7.12.1 Usage of terms

7.12.1.1 Reusable

A characteristic of a product or packaging that has been conceived and designed to accomplish within its life cycle a certain number of trips, rotations or uses for the same purpose for which it was conceived.

7.12.1.2 Refillable

A characteristic of a product or packaging that can be filled with the same or similar product more than once, in its original form and without additional processing except for specified requirements such as cleaning or washing

7.12.2 Qualifications

7.12.2.1 No product or packaging shall be claimed to be reusable or refillable unless the product or packaging can be reused or refilled for its original purpose.

7.12.2.2 A claim that a product or packaging is reusable or refillable shall be made only where:

a) a programme exists for collecting the used product or packaging and reusing or refilling it; or

b) facilities or products exist that allow the purchaser to reuse or refill the product or package.

7.12.2.3 If programmes for collecting the used product or packaging, or facilities for the purpose of reusing or refilling it, are not conveniently available to a reasonable proportion of purchasers, potential purchasers and users of the product in the area where the product or packaging is sold, then the following shall apply.

a) A qualified claim of reusability or refillability shall be used.

b) The qualified claim shall adequately convey the limited availability of collection programmes or facilities

c) Generalized qualifications, such as “Reusable/refillable where facilities exist”, which do not convey the limited availability of collection programmes or facilities are not adequate.

7.12.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, the information referred to in 6.5 shall include evidence of the following.

a) The product for which the claim is being made is being refilled or reused.

b) That reuse or refilling facilities are available to accommodate the product for which the claim is being made.

c) The facilities required to reuse or refill the product are conveniently available to a reasonable proportion of the purchasers, potential purchasers and users of the product.

7.13 Waste reduction

7.13.1 Usage of term

Reduction in the quantity (mass) of material entering the waste stream as a result of a change in the product, process or packaging.

NOTE Waste may include discharges to air and water as well as solid waste from manufacturing or treatment processes.

7.13.2 Qualifications

7.13.2.1 All claims regarding waste reduction shall be qualified. As waste reduction is a comparative claim, the requirements of 6.3 shall be met.

7.13.2.2 Waste reduction of products and packaging may include reduction in waste generated in the production, distribution, use and disposal stages.

7.13.2.3 Reduced waste claims may include not only the reduction in water content of solid waste but also the reduction in mass through waste treatment processes.

7.13.2.4 Calculations of process waste reduction shall not include in-process re-utilization of materials such as rework, regrind or scrap materials generated within the process and capable of being reused within the same process that generated it.

7.13.2.5 Waste generators who transfer wastes to other users that intend to utilize the waste for a constructive purpose, other than to put it into the waste stream, may make a claim of waste reduction.

7.13.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6. In addition, reduced waste amount may be calculated from material balance sheets, as well as from the actual measurement of waste.

7.14 Renewable material

7.14.1 Usage of term

Material that is composed of biomass from a living source and that can be continually replenished.

7.14.2 Qualifications

When claims of renewability are made for virgin materials, those materials shall come from sources that are replenished at a rate equal to or greater than the rate of depletion.

An unqualified claim of renewability shall only be made when the product consists of 100 % renewable material, allowing for de minimis amounts of non-renewable materials being contained in that material. Otherwise, renewability claims shall be qualified as follows:

a) where a claim of renewable material content is made, the percentage by mass of renewable material to the total mass shall be stated;

b) the percentage of renewable material content (mass fraction) for products and packaging shall be separately stated and shall not be aggregated.

All renewable claims shall be compliant with all other requirements of this International Standard. In particular, the onus on a claimant to follow the principles set out in this clause shall not be diminished by substituting like terms (see 7.1).

7.14.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6.

7.15 Renewable energy

7.15.1 Usage of term

Energy derived from sources that are non-exhaustible or capable of continuous replenishment. Renewable energy sources include, but are not limited to, sunlight and wind energy. They also include biomass and geothermal sources that conform to 7.14.

Claims of renewability for energy sources associated with movements of water shall only be made if they are from sources that are managed in accordance with the principles of sustainable development (see 3.1.17).

7.15.2 Qualifications

An unqualified claim for renewable energy shall only be made when 100 % of the energy supply is renewable. Otherwise, renewable energy claims shall be qualified.

Where a proportion of the energy supply is from renewable sources, the percentage shall be clearly stated.

All renewable energy claims shall be compliant with all other requirements of this International Standard. In particular, the onus on a claimant to follow the principles set out in this clause shall not be diminished by substituting like terms (see 7.1).

NOTE Particular care is needed when making a claim for a product or process relating to use of electrical energy from the grid, when that electrical energy is claimed to contain a percentage of renewable energy.

7.15.3 Evaluation methodology

Evaluation shall be undertaken in accordance with Clause 6.

7.16 Sustainable

7.16.1 Usage of term

As stated in 5.5, self-declared claims of achieving sustainability shall not be made. It is re-emphasized in this subclause that unqualified claims of "sustainable" and "sustainability" shall not be used.

When using a qualified claim of "sustainable", "sustainability" or "sustainable development" (see 3.1.17), any portion of that claim that relates to an environmental aspect shall conform to this International Standard.

NOTE The term "sustainable" can be used in third-party verified schemes, such as those related to forestry and fisheries, but such schemes are outside the scope of this International Standard.

7.17 Claims relating to greenhouse gas emissions

7.17.1 General

"Carbon footprint" is a common term used in the provision of information relating to greenhouse gas (GHG) (see 3.1.9) emissions of both processes and products. This subclause covers claims related to the "carbon footprint" of products and also claims of "carbon neutral".

7.17.2 Product "carbon footprint"

7.17.2.1 Usage of term

A product "carbon footprint" is understood as the net amount of life cycle (see 3.1.10) GHG (see 3.1.9) emissions. It also includes long-term net removals of CO2.

A product "carbon footprint" is a way of reporting the environmental impact category of global warming or climate change that is being assessed during a life cycle assessment. It does not indicate the overall environmental performance of a product during its life cycle [see 5.7 h)].

7.17.2.2 Evaluation methodology

The quantification and communication of a product "carbon footprint" shall be carried out in accordance with ISO/TS 14067.

7.17.3 "Carbon neutral"

7.17.3.1 General

"Carbon neutral" refers to a product (as a product system) that has a "carbon footprint" (see 7.17.2) of zero or a product with a "carbon footprint" that has been offset.

7.17.3.2 Usage of term

In relation to a product, "carbon neutral" requires that all the GHG (see 3.1.9) emissions from all stages of the product life cycle, and within the specified product system, have been reduced, removed or accounted for through a system of offsets or credits, or by other means.

An unqualified claim of "carbon neutral" shall not be made.

7.17.3.3 Qualifications

"Carbon neutrality" claims shall include:

a) a statement that the product "carbon footprint" is zero; or

b) a clear statement about which elements of the product life cycle have been offset.

Claims of "carbon neutrality" involving offsets shall also be qualified with a statement that declares the product "carbon footprint" and clearly explains what has been offset, providing full details of the offset scheme used and information that enables the purchaser to access sources of further information explaining the offset programme.

All carbon neutral claims shall be compliant with all other requirements of this International Standard. In particular, the onus on a claimant to follow the principles set out in this clause shall not be diminished by substituting like terms (see 7.1).

NOTE It is advisable that an organization give preference to achieving carbon neutrality through the strategies of prevention and reduction of its own emissions and substitution of renewable energy sources for fossil energy sources. Acquisition of carbon offsets can be used to compensate for remaining emissions.

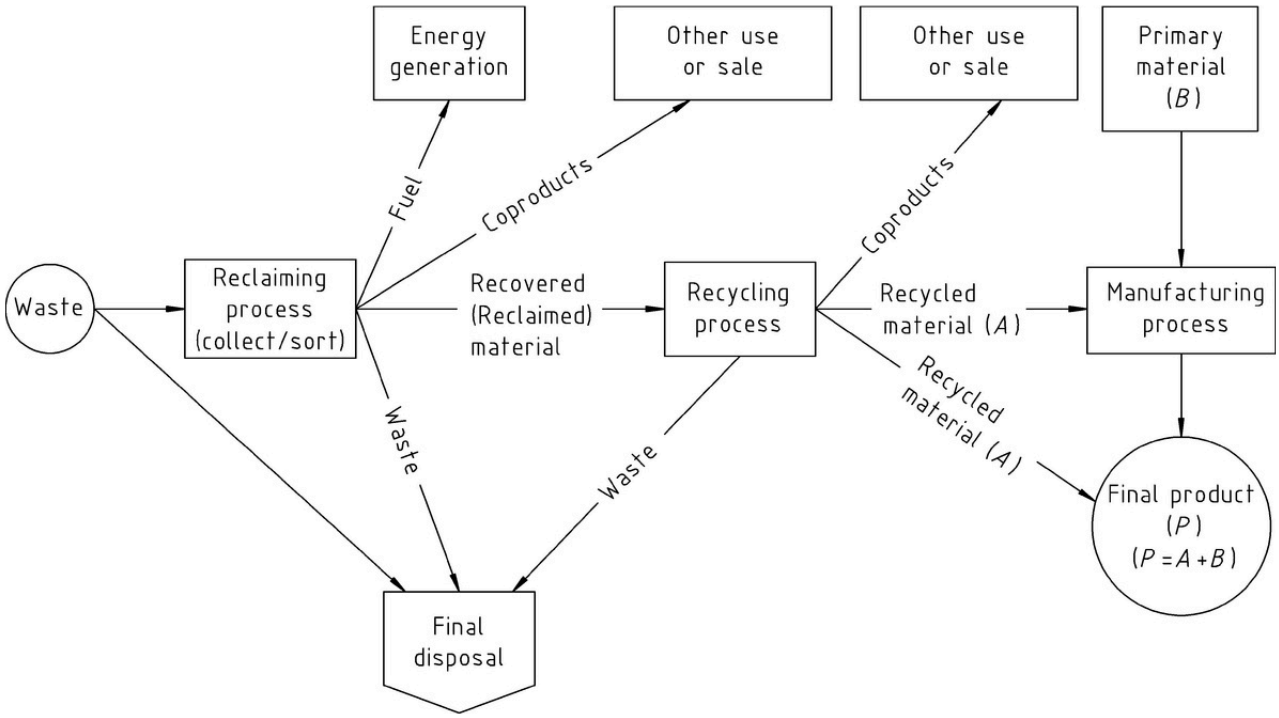
7.17.3.4 Evaluation methodology

Determination of "carbon neutrality" is based on, first, the calculation of a carbon footprint (see 7.17.2.2), then the deduction of offsets equivalent to the emissions of the carbon footprint. Alternatively, carbon neutrality can be achieved by a product whose "carbon footprint" is zero.

Annex A
(informative)

Simplified diagrammatic representation of a recycling system

Some recovered (reclaimed) materials may go directly to a manufacturing process, which includes the recycling process, without having a separate operation called the "Recycling process", in the system. When this is done, coproducts and waste are still likely to be generated in that manufacturing process. These coproducts and waste shall be accounted for when determining the mass of recycled material to be used in the formula for calculating recycled content. A simplified diagrammatic representation of a recycling system is shown in Figure A.1.



$$\text{Recycled content of product } (X\ \%) = \frac{A}{P} \times 100.$$

NOTE This Figure represents a simplified example of a recycling system and is intended to provide information for clarity on recycled content calculations. For more complete examples, refer to ISO/TR 14049.

Figure A.1 — Simplified diagrammatic representation of a recycling system

Bibliography

[1] ISO/IEC Guide 14, *Purchase information on goods and services intended for consumers*

[2] ISO 14025:2006, *Environmental labels and declarations — Type III environmental declarations - principles and Procedures*

[3] ISO 14040:2006, *Environmental management - Life cycle assessment - Principles and framework*

[4] ISO 14044, *Environmental management — Life cycle assessment — Requirements and guidelines*

[5] ISO/TR 14049, *Environmental management* — Life cycle assessment — Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis

Examples of standards for material identification symbols:

References [6] to [9] give examples of standards and industry publications which deal with material identification. These are only examples and this is not intended to be an exhaustive list.

[6] ISO 11469, *Plastics — Generic identification*

[7] IEC 61429, *Marking of secondary cells and batteries with the international recycling*

[8] TECHNICAL BULLETIN NO. PBI-24-1988 Revision 2, October 1, 1990 Voluntary Guidelines — Plastic Bottle Material Code System: Mold Modification Drawings, The Society of the Plastics Industry, Inc. (SPI)

[9] TECHNICAL BULLETIN NO. RPCD-13-1989 Revision 1, October 1, 1990 Voluntary Guidelines — Rigid Plastic Container Material Code System: Mold Modification Drawings, The Society of the Plastics Industry, Inc. (SPI)

Quality assurance of testing and claim verification data

References [10] to [13] give examples of standards which can provide useful information and guidance regarding the collection of reliable data that can then be used for claim verification. These are only examples and this is not intended to be an exhaustive list.

[10] ISO 9004, *Managing for the sustained success of an organization - A quality management approach*

[11] ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

[12] ANSI/ASQC E4:1994, *Specifications guidelines for quality systems for environmental data collection and environmental technology programs*

[13] EN 45001:1989, *General criteria for the operation of testing laboratories*

Examples of standards for testing and claim verification

References [14] to [68] list standards and industry methods which could be considered for use when collecting various data necessary for claim verification. The list is not exhaustive and is only intended to provide an illustration of the types of standards that could be considered when selecting methods for testing and verification of self- declared environmental claims.

The methods in this list should only be used where the method chosen meets the relevant requirements set out in Clause 6, as they apply to the particular claim being made.

Recycled content

[14] ASTM D5663:1995, *Standard Guide for Validating Recycled Content in Packaging Paper and Paperboard*

[15] BS 7500:1995, *Specification for marking of recycled paper board*

[16] AS 4082-1992, *Recycled paper — Glossary of terms*

[17] PBI 27-1993, *Technical Bulletin — Protocol Source Reduction, Reuse, Recycling and Disposal of Steel Cans*

Reduced resource use

[18] ASTM D5833:1995, *Standard Guide for Source Reduction, Reuse, Recycling and Disposal of Steel Cans*

[19] ASTM D5834:1995, *Standard Guide for Source Reduction, Reuse, Recycling and Disposal of Solid and Corrugated Fibreboard (Cardboard)*

Degradability

[20] ISO 7827, *Water quality — Evaluation of the "ready", "ultimate" aerobic biodegradability medium — Method by analysis of dissolved organic carbon (DOC)*

[21] ISO 9408, *Water quality — Evaluation of the ultimate aerobic biodegradability of organic compounds in aqueous medium by determination of oxygen demand in a closed respirometer*

[22] ISO 9439, *Water quality — Evaluation of the ultimate aerobic biodegradability of organic compounds in aqueous medium — Carbon dioxide evolution test*

[23] ISO 10707, *Water quality — Evaluation in an aqueous medium of the "ultimate" aerobic biodegradability of organic compounds — Method by analysis of biochemical oxygen demand (closed bottle test)*

[24] ISO 14851, *Determination of the ultimate aerobic biodegradability of plastic material in an aqueous medium — Method by measuring the oxygen demand in a closed respirometer*

[25] ISO 14852, *Determination of the ultimate aerobic biodegradability of plastic material in an aqueous medium — Method by analysis of evolved carbon dioxide*

[26] ISO 14853, *Plastics — Determination of the ultimate anaerobic biodegradation of plastic materials in an aqueous system — Method by measurement of biogas productio*

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[27] ISO 14855-1, *Plastics — Evaluation of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide — Part 1: General method*

[28] OECD 301, *Guideline for testing of chemicals*

[29] ASTM D3826-91, *Determining degradation end point in degradable polyethylene and polypropylene using a tensile test*

[30] ASTM D5071-91, *Standard practice for operating xenon arc type exposure apparatus with water for exposure of photodegradable plastics*

[31] ASTM D5208-91, *Operating fluorescent ultraviolet (UV) and condensation apparatus for exposure of photodegradable plastics*

[32] ASTM D5209-92, *Test method for determining the aerobic biodegradation of plastic materials in the presence of municipal sewage sludge Test method*

[33] ASTM D5210-92, *Test method for determining the anaerobic biodegradation of plastic materials in the presence of municipal sewage sludge*

[34] ASTM D5247-92, *Test method for determining the aerobic biodegradability of degradable plastics by specific microorganisms*

[35] ASTM D5271-93, *Test method for determining the aerobic biodegradation of plastic materials in an activated-sludge wastewater treatment system*

[36] ASTM D5272-92, *Outdoor exposure testing of photodegradable plastics*

[37] ASTM D5338-93, *Test method for determining aerobic biodegradation of plastics under controlled composting conditions*

[38] ASTM D5437-93, *Weathering of plastics under marine floating exposure*

[39] ASTM D5509-96, *Standard practice for exposing plastics to a simulated compost environment*

[40] ASTM D5510-94, *Standard practice for heat ageing of oxidatively degradable plastics*

[41] ASTM D5511-94, *Standard test method for determining anaerobic biodegradation of plastic materials under high-solids anaerobic digestion conditions*

[42] ASTM D5512-96, *Standard practice for exposing plastics to a simulated compost environment using an externally heated reactor*

[43] ASTM D5525-94, *Standard practice for exposing plastics to a simulated active landfill environment*

[44] ASTM D5526-94, *Standard test method for determining anaerobic biodegradation of plastic materials under accelerated landfill conditions*

[45] ASTM D5988-96, *Standard test method for determining aerobic biodegradation with oil of plastic materials or residual plastic materials after composting*

[46] ASTM D6002-96, *Standard guide for assessing the compostability of environmental degradable plastics*

[47] ASTM D6003-96, *Standard test method for determining weight loss from plastic materials exposed to simulated municipal solid waste (MSW) aerobic compost environment*

" " _id="b49""[48] DIN V 54900-2, *Testing of the compostability of plastics — Part 2: Testing of the complete biodegradability of plastics in laboratory tests" ""*

" " _id="b50""[49] DIN V 54900-3, *Testing of the compostability of plastics — Part 3: Testing under practice-relevant conditions and testing of quality of the composts*" ""

" " _id="b51""[50] DIN V 54900-4, *Testing of the compostability of polymeric materials — Part 4: Testing of the ecotoxicity of the composts*" ""

Energy and water consumption

" " _id="b52""[51]IEC 60436, Methods for measuring the performance of electric dishwashers" ""

" " _id="b53""[52]IEC 60350, Electric cooking ranges, hobs, ovens and grills for household use — Methods for measuring performance" "

" " _id="b54""[53]IEC 60379, Methods for measuring the performance of electric storage water-heaters for household purposes" ""

" " _id="b55""[54]IEC 60531, Household electric thermal storage room heaters — Methods for measuring performance" ""

" " _id="b56""[55]IEC 60675, Household electric direct-acting room heaters — Methods for measuring performance" ""

" " _id="b57""[56]IEC 60456, Clothes washing machines for household use — Methods for measuring the performance" ""

" " _id="b58""[57]IEC 61121, Electric tumble dryers for household use — Methods for measuring the performance" ""

" " _id="b59""[58]IEC 60530, Methods for measuring the performance of electric kettles and jugs for household and similar use" ""

" " _id="b60""[59]IEC 60661, Methods for measuring the performance of electric household coffee makers" ""

" " _id="b61""[60]IEC 60705, Household microwave ovens — Methods for measuring performanceIFN<> N ">"

[61] ISO 7371, Household refrigerating appliances — Refrigerators with or without low temperature compartment —

Characteristics and test methods

[62] ISO 8187, *Household refrigerating appliances — Refrigerator-freezers - Characteristics and test methods2)*

[63] ISO 8561, *Household frost-free refrigerating appliances — Refrigerators, refrigerator-freezers, frozen food storage cabinets and food freezers cooled by internal forced air circulation — Characteristics and test methods* 3)

[64] ISO 5151, *Non-ducted air conditioners and heat pumps — Testing and rating for performance*

[65] ISO 13253, *Ducted air-conditioners and air-to-air heat pumps — Testing and rating for performance*

[66] ISO 13256 (all parts), *Water-source heat pumps — Testing and rating for performance*

[67] ISO 15042 (all parts), *Multiple split-system air conditioners and air-to-air heat pumps — Testing and rating for performance*

[68] ISO 5801, *Fans — Performance testing using standardized airways*