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**Packaging — Accessible design —
Information and marking**

Emballages — Conception accessible — Informations et marquage



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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).

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

This document was prepared by Technical Committee ISO/TC 122, *Packaging*.

Introduction

In our aging and welfare-oriented society, there is an increasing awareness of full and effective participation of older persons and persons with disabilities in society on an equal basis. A common challenge facing the packaging industry in the world is to develop packages which have clear information and marking necessary for use and purchase that are understandable for the widest possible range of users, including older persons and persons with disabilities.

Information and marking on packaging go beyond ensuring safety and security to also add more value to the packaged products for older persons and persons with disabilities. When designing packaging that is expected to ensure accurate and appropriate information, greater consideration is required for increasing accessibility to the packaged products for older persons and persons with disabilities. Such persons sometimes have difficulties in obtaining and understanding the information conveyed by labelling and other means of information technologies such as a bar code read by a smart phone.

Noting that the degree of comprehension for information and marking can vary widely according to age and human abilities such as sensory and cognitive abilities, this document addresses essential points to enhance the accessibility of information and marking in packaging in the concepts and goals which are expressed in ISO/IEC Guide 71 [[11](#)] and ISO/TR 22411 [[8](#)].

Packaging — Accessible design — Information and marking

1 Scope

This document provides requirements and recommendations concerning accessible design of consumer packaging with regard to information and marking.

This document specifies considerations and methods for designing and presenting information and marking to make consumer packages accessible to people with the widest range of capabilities by considering their sensory and cognitive abilities.

This document applies to all types of information and marking presented on consumer packaging. Specifically excluded from this document are information and marking for medicinal products and medical devices including tamper verification.

The design considerations and methods specified in this document are primarily intended for designers, developers and evaluators of packaging.

2 Normative references

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

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 8317, *Child-resistant packaging — Requirements and testing procedures for reclosable packages*

ISO 17351, *Packaging — Braille on packaging for medicinal products*

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

ISO 24503, *Ergonomics — Accessible design --Tactile dots and bars on consumer products*

3 Terms and definitions

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

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 cognition

extent to which a user can understand the appropriate information as it is intended

[SOURCE: ISO 17480:2015, 3.5]

3.2

consumer packaging

packaging, constituting, with its contents, a sales unit to the final user or consumer at the point of retail

[SOURCE: ISO 17480:2015, 3.1]

3.3

context of use

combination of specified users, goals and tasks, resources and environment

Note 1 to entry: The environment in a context of use includes the technical, physical, social and organizational environments.

[SOURCE: ISO 9241-11:1998, 3.5 — modified.]

3.4

instrument-based evaluation

evaluation that uses measurement instruments to obtain data

3.5

user-based evaluation

evaluation that uses a method involving users with or without the use of measurement instruments and provides insight into the user's sensory, physical and cognitive aspects

3.6

tactile information

human sensory information generated by touch

Note 1 to entry: There are two types of touch sensing. One is passive and the other active, the latter being called haptic. In this document, tactile information means both types of touch sensing.

4 Design considerations for increasing accessibility of information and marking for packaging

4.1 General design consideration

4.1.1 Considerations of diverse users and diverse contexts of use

Designing information and marking of packaging shall consider on diverse users and diverse context of use. Diverse users include users with different ages, genders, human abilities (sensory, physical and cognitive), languages, as well as life styles and cultures. Context of use includes different physical environments (lighting, thermal condition), tasks involved in and social and organizational environments.

[Annex A](#) presents disabilities of human sensory, physical and cognitive abilities, and their consequences, as well as aging effects.

4.1.2 Use of alternative or multiple means of presentation

Information and marking on packaging should be presented with at least two different means of presentation for users who are unable to obtain some information due to their disabilities. Whenever possible, multiple means of presentation should be employed to increase accessibility. Different means include different sensory inputs/outputs, different modes of presentation within the same sensory ability, e.g. colours and symbols, and different methods of presentation, e.g. printed letters and audio information.

The following considerations may apply but are not restricted to the following:

- represent some or a whole part of the printed visual information by tactile or auditory information;

EXAMPLE 1 Braille used on medicinal packaging to present some of the printed information (see ISO 17351).

- use colour information additionally to discriminate the different meanings of visual information merely expressed by letters and symbols, or vice versa;

EXAMPLE 2 Marking of opening position by different colour from the background, in addition to letters writing “open here”.

- provide symbols and pictograms in addition to the information merely expressed by letters, or vice versa;

EXAMPLE 3 Marking of opening position by a scissors pictogram, in addition to letters writing “open here”.

- provide ICT information in addition to printed information.

EXAMPLE 4 The bar code or the ICT tag of the package information.

4.1.3 Use of simple and clear information

Information and marking on packaging shall be simple and comprehensive for older people and people with visual and cognitive disabilities to understand the meaning correctly and instinctively. Ambiguous information and marking that cause misunderstanding and misidentification shall not be used.

The following considerations may apply but are not restricted to the following:

- use consistent expressions with common words, phrases, symbols and pictograms;
- select as little information as possible depending on the level of priority of the information;
- use a classification or hierarchy of the information when presenting;
- use graphic symbols or pictograms rather than long and complex wordings.

4.1.4 Highlighting information and marking of importance

Information and marking which are important for correct identification and use shall be clearly shown by highlighting them with different features from the adjacent areas.

The following considerations may apply but are not restricted to the following:

- use different colour from the adjacent areas;
- use different texture from the adjacent areas;
- use different sizes or types of font, symbols and pictograms from the adjacent area;
- use different sizes or types of font, symbols and pictograms from the adjacent areas;

EXAMPLE Sans Serif words or sentences used in the Serif sentences.

- provide notes and/or examples when necessary.

4.1.5 Limited amount of information and marking

The amount of information and marking on packaging should not be too much to read or understand. Important information shall be prioritized. Unnecessary, redundant and repeated information not required shall be omitted.

The following consideration may apply but is not restricted to the following:

- related or a similar type of information is logically grouped and presented in the same area or in the same style but not distributed separately nor in a different format.

4.1.6 Location of information

Appropriate positioning of information and marking shall be considered to avoid users missing or overlooking the information on packaging.

The following considerations may apply but are not restricted to the following:

- information and marking on packaging should be clearly visible and legible;
- important information and markings shall not be lost or destroyed by opening and closing the package (see [4.3.1](#));
- tactile marking and Braille should be located where users can easily find and touch them.

4.1.7 Additional marking and signage placement

The placement of additional marking and signage shall not reduce the legibility of printed text and graphics for sighted people as well as the legally required statutory information to be labelled on the packaging in the specific country or market.

NOTE 1 This is indicated when, for example, the application of Braille or additional marking corrupts printed text and graphics.

NOTE 2 The manufacturer is encouraged to place the Braille or additional marking away from printed text and graphics, where possible.

4.2 Design considerations required from human abilities and characteristics

4.2.1 Luminance contrast

Contrast between letters/symbols/pictograms and the background shall be set as high as possible to ensure better visibility. However, too much glare can cause legibility problems.

The following considerations may apply but are not limited to the following:

- use black letters or symbols on white background where high luminance contrast is needed;
EXAMPLE Luminance contrast above 70 % is recommended (see [Annex C](#)).
- avoid glossy background that reduces the luminance contrast with reflected light;
- use negative contrast where symbols and letters are brighter than the background;
- avoid pale or light colour for letters and symbols on light background, and dark and deep colour on dark background;
- estimate correct luminance contrast when coloured letters and symbols are used on coloured background. When blue letters or symbols are used on dark background, the luminance contrast is set larger for older people than that for younger people.

NOTE The method for estimating age-related luminance contrast for coloured lights is given in ISO 24502.

4.2.2 Colour and colour combination

Colour and colour combination should be used so that information and marking on packaging are more visible and comprehensive than those not using colour. Selection of colour or colours for a combination

shall appropriately consider the user's ability to perceive colour such as visual defects (e.g. colour blindness) or low-light conditions.

The following considerations may apply but are not limited to the following:

- use basic colours for identification and marking;

NOTE 1 Basic colours include red, orange, yellow, green, blue, purple, pink, brown, white, grey and black.

- use colour consistently;
- avoid the red/green combination for users with colour defects;
- avoid blue on dark background for older users;
- avoid yellow on white background for older users;
- provide non-colour associated information such as text, symbols and texture when information only depends on colour (see [4.1.2](#));
- follow ISO 3864-1 when information and marking are concerned with safety;
- consider the change of colour appearance in a dark environment;

NOTE 2 Red colour, of vivid tone in particular, is hard to see in a dark environment.

- use colours that belong to different basic colour groups to make the combination discriminable.

NOTE 3 The method for creating colour combinations based on basic colours for people at any age is shown in ISO/TR 22411 and ISO 24505.

4.2.3 Letters and legibility

Letters, words and sentences on packaging shall be legible for the intended users and intended context of use. Legible types and sizes of font for different ages as well as for different types of disabilities shall be appropriately selected. Considerations shall be given particularly on luminance level of viewing, viewing distance, luminance contrast between letters and background (see [4.2.4](#)) of the packaging surface, colour of letters and background (see [4.2.3](#)), location of letters, number of letters in one sentence line and spacing between letters, words and lines.

The following considerations may apply but are not limited to the following:

- use relatively larger font sizes for older people in near viewing distance;
- use relatively larger font sizes for darker luminance/illuminance condition;
- use Sans Serif fonts rather than Serif fonts for better legibility;
- ensure that the ascenders of lower case characters project above the type height by approximately 20 %;
- ensure that lower case characters with descenders project below the line of text by approximately 20 %;
- avoid cursive text for sentences;
- avoid sentences with capital letters only;
- avoid sentences with italic letters only;
- keep appropriate inter-character spacing and inter-line spacing;
- provide negative polarity fonts (white letters on dark background) for users with low vision;
- provide much larger font sizes (about 10 times) for people with low vision;

- find the minimum legible font size for a combined condition of age, luminance level and viewing distance and use it as a unit of legible font size.

NOTE 1 Information about minimum legible font size is shown in ISO/TR 22411.

NOTE 2 An example of a checklist is given in [Annex C](#).

4.2.4 Graphic symbols and pictograms

Whenever possible, information and marking should use graphic symbols and pictograms to make the meaning simple, clear and prominent, as well as accessible in particular to those who have difficulties in reading letters. When information is given in multiple languages, graphical symbols and pictograms should be used, even if only partially.

The following considerations may apply but are not restricted to the following:

- use simple symbols and pictograms that are familiar and clear;
- provide a table of their meanings when a number of symbols and pictograms are used;
- use symbols and pictograms which are understandable when presented independently;
- whenever possible, graphic symbols and pictograms should be explained by text and the text should be placed in an adjacent area;
- ensure that graphic symbols and pictograms are legible from the expected viewing distance.

4.2.5 Languages

Languages used in information and marking of packaging shall be clear. Unless otherwise specified, official language(s) of the country in which packaging is used shall apply. If possible, other language(s) should be used in addition to the official languages. Technical terms and foreign words should be limited in use.

4.2.6 Use of tables

Tables should be effectively used to make sets of information comprehensive. They should be presented with a consistent form within a packaging design.

4.2.7 Avoidance of glare

Very strong glare from the surface of a packaging, such as a mirror surface, should be avoided to enable users to read information and marking on the packaging comfortably. Special care should be taken for older people and people with low vision who are more sensitive to glare.

EXAMPLE Use matte surface instead of high-reflection specular surface.

4.2.8 Tactile marking

Whenever possible, tactile marking should be used as a useful way of conveying information. It may be used as an alternative means to convey visual information for persons with visual disabilities (see [4.1.2](#)). In particular, it may be effectively used when packaging has similar shapes and weights but contain different contents.

Complex tactile marking shall be avoided and the marking shall be large enough to be legible by touch. Tactile marking can be effectively used with defining common meanings to the marking.

EXAMPLE 1 A tactile notch to identify an opening location.

EXAMPLE 2 A tactile triangle mark to recognize packaging with toxic material (see ISO 11683).

EXAMPLE 3 A tactile marking on the side of a shampoo bottle to differentiate it from a conditioner bottle (see ISO 11156).

The following considerations may apply but are not limited to the following:

- design appropriate raised height and width or size for tactile dots and lines to ensure tactile legibility (recommended dimensions for tactile dots and bars are given in ISO 24503) (see [Annex B](#));
- design appropriate size for tactile letters and marking to ensure tactile legibility (recommended sizes for tactile letters and markings are given in JIS S0052) (see [Annex B](#));
- use tactile texture to mark, identify and discriminate the area from the surroundings;
- locate tactile markings in positions where the users will always be able to touch them;
- avoid placing tactile markings in an area adjacent to other tactile markings.

4.2.9 Braille signage

Braille should be used as an alternative means to convey written information to people who need non-visual information such as people with visual disabilities. Unless otherwise specified, designing and using Braille in packaging should follow the requirements and recommendations prescribed in ISO 17351.

Where no burst-through of the material on which Braille is embossed or no reduction of legibility of printed text is expected, a dot height of at least 0,3 mm and up to 0,9 mm should be achieved for increasing Braille legibility. In case of burst-through (i.e. cardboard) or reduction of legibility of printed text, a target dot height of 0,2 mm is recommended. See ISO 17351.

EXAMPLE Braille signage of *osake* (alcoholic drinks in Japanese) on a can that contains alcoholic drink.

An exclusion zone should be placed for all sides of the Braille cell or cells to avoid disturbing the tactile reading of the Braille due to things that protrude from the surface or that have different tactile textures.

NOTE An exclusive zone of 6 mm width is required in ISO 17049.

4.2.10 Auditory signals

Sound may be used as feedback information to ensure that opening or reclosing actions are completed. The sound pressure level should be large enough to be audible for older people and people with hearing disabilities.

NOTE Clicking or feedback sounds can be detected by tactile sense, too.

4.3 Design considerations specific to packaging

4.3.1 Opening

Information and marking for opening instructions shall be legible, clear and easy to find. It shall not be deleted or destroyed after opening or in use.

The following considerations may apply but are not limited to the following:

- retain important information attached to the package even after it is opened;

EXAMPLE 1 Expiration date printed on a cap of a plastic bottle.

- provide information whether the package has been opened;

EXAMPLE 2 A tamper-evident virgin seal or a stopper used for opening.

- provide markings on opening position so that they are easy to find;

EXAMPLE 3 A marking such as an arrow to indicate the opening position.

- use sound or visual marking for confirming reclosing;

EXAMPLE 4 A click sound of a screw cap.

- provide an opening position and marking on the front surface of the package;
- when two or more means of opening are available, clearly show all the means to user.

4.3.2 Use

Information and marking for use concerning how to identify the products, how to use the contents and how to know the condition of the products, shall be legible, clear and easy to understand.

The following considerations may apply but are not restricted to the following:

- provide additional information to distinguish packages of similar shapes and similar weights by using tactile or non-visual information for people with visual disabilities;

EXAMPLE A tactile marking on the shampoo bottle but not on the conditioner.

- provide additional information to distinguish packages likely placed adjacently on the store shelf by using visual (colour, etc.), tactile or other sensory information for older people and people with visual disabilities;
- provide information on the residual quantity left in the package;
- provide information on how to use devices such as a microwave oven when it is in need of use for processing contents;
- provide machine readable information and tactile guidance for users to get additional or detailed information.

4.3.3 Storage

Information and marking for storage of packaging shall be legible, clear and easy to understand. Guidance should be given for storage conditions of the contents.

The following considerations may apply but are not restricted to the following:

- show the need to keep contents refrigerated;
- provide means to confirm that the package has been reclosed;
- indicate the orientation of the package (vertical or horizontal) to avoid leakage;
- keep important information and marking legible throughout the expected life of the product even during storage;
- clearly show warnings and instructions for storage and disposal, especially when the contents are potentially hazardous. The package should also be child-resistant in accordance with ISO 8317.

4.3.4 Disposal

Clear instructions shall be given on disposal of the package itself, as well as of its contents. Where a specific instruction on how to dispose of the package is needed, it shall be clearly described. Where possible, graphics and/or tables, as well as tactile markings should be given for better understanding.

Where needed, how to separate packaging waste should be described.

4.3.5 Others

Information for contact with suppliers should be provided for communication between users and suppliers.

Contact information such as the telephone number and/or URL for the homepage of manufacturers should be provided on the package.

4.4 Design considerations related to safety

Information and marking related to safety in using packages (i.e. opening, closing, use, storage and disposal) shall be clearly presented so that users can always catch the information before use.

Special care shall be taken to secure safety for people with special requirements such as older people and people with disabilities as well as children and people with allergic reactions.

The safety-related information and marking shall not be removed or made illegible until the end of use. The safety-related information and marking include:

- prevention of misuse;

EXAMPLE 1 A warning to keep out of reach of children or to keep it away from children.

EXAMPLE 2 A warning saying “Do not eat” or “Not for drinking”.

EXAMPLE 3 A warning not to use it near fire.

- identification of harmful contents;

EXAMPLE 4 A warning on contained substances that cause allergic reactions.

- prevention of injury in manipulation and handling;

EXAMPLE 5 A warning to pay attention not to injure fingers with sharp edges;

- first aid in case of accidents.

EXAMPLE 6 A warning saying “Contact doctor if skin has a rash, an itch or pain.”

5 Evaluation of information and marking

5.1 General

Evaluation of accessibility of information and marking of packaging shall be conducted for considering diverse users and diverse contexts of use. Both instrument-based evaluation and user-based evaluation may apply. When obtaining a direct user’s evaluation on his/her performance with information and marking concerning human sensory or cognitive aspects, the user-based evaluation should be used no matter how it involves measuring instruments.

5.2 Instrument-based evaluation

Instrument test methods can provide physical quantitative data with regards to certain attributes of information and marking. The data includes luminance, illuminance, colour and contrast, as well as the spatial dimensions of symbols, letters and pictograms with visual information. With tactile marking, the data may include dimensional information such as size (height, width and depth). The data generated by these instrument-based evaluations can be used to compare characteristics of related packaging and to provide possible insights for improved designs when combined with user-based evaluation.

5.3 User-based evaluation

User-based evaluation enables the assessment of packaging designs and allows the development of an understanding of user responses to information and marking of packaging. User-based evaluation should be used in conjunction with other psychological methods such as questionnaires and structured or unstructured interviews. The data generated by these user-based evaluations can provide possible insights for improved designs.

Instead of testing with the general population, one should select a test population from those who are the most sensitive based on their characteristics and capabilities in use of the packaging. The results can also be valid for the general populations that are less sensitive. General information on how to set up and perform user-based evaluation can be found in ISO 20282 (all parts).

To enable fast screening of relevant basic features with regard to the information design of consumer packaging, a checklist is included in [Annex C](#).

6 Conformance

Conformance with this document is achieved by satisfying all the requirements. See [Annex D](#).

If a package is claimed to have met the requirements in this document, the procedure used to determine how they have been met shall be specified. The detail to which the procedure is specified is a matter of negotiation between the involved parties.

Users of this document may either utilize the procedure and forms provided in [Annex D](#) or develop another procedure tailored to their particular needs.

Annex A (informative)

Types of disabilities for human functions

Possible types of disabilities recognized formally or practically, together with the problems or inconveniences in daily life associated with said disabilities, are given in [Table A.1](#). For more details, see ISO/IEC Guide 71.

Table A.1 — Types of disabilities of human functions and their consequences

Classification	Type of disabilities	Description	Problems with information and marking in packaging
Vision	Vision loss	A person who has no or very limited visual sense of light.	Information can be obtained by auditory and/or tactile information.
	Low vision	A person with significant seeing impairments. The WHO definition is a person with visual acuity less than 0,3 that is unable to be corrected by lenses or a person with a very limited visual field.	Often requires higher contrast and larger size of letters or symbols. Some people with low vision require larger colour differences for discrimination.
	Colour blindness	A person who lacks or has abnormality of one or more of the three light receptors in the retina of the eye. Three different types of colour defects exist which are P-type, D-type and T-type for which the red, green and blue receptor is respectively missing or does not appropriately work.	Some colour combinations of red and green cannot be distinguished.
	Aging effects	Slight or moderate degree of disabilities for most of the visual functions such as visual acuity, colour discrimination, etc.	Reduced ability to obtain most of the visual information.
Hearing	Hearing loss	A person who has no or almost no hearing ability from birth and mostly uses sign language.	Difficulty in understanding both written and spoken language.
	Hard of hearing	A person who has acquired hearing loss or mild disability in hearing from birth. The person basically understands the language.	Reduced ability in hearing.
	Aging effect	Slight or moderate degree of disabilities for most of the hearing functions including language.	

Classification	Type of disabilities	Description	Problems with information and marking in packaging
Touch	Tactile disabilities	Sensitivity to tactile pressure sense, detection of raised markings/edges, spatial discrimination of a gap/groove, and texture, is significantly reduced.	A person with tactile disabilities has the risk to be injured by sharp edges.
	Aging effect	Slight to moderate degree of disabilities for most of the tactile functions.	Sensitivity to most of the tactile markings is reduced.
Physical functions	Physical disabilities	Physical disabilities include reduced abilities caused by body size and shape (amputation, etc.), of upper- and lower extremities (dexterity, manipulation, movement), of muscle power and endurance (pulling, pressing).	No direct relation to information and marking, but indirect relation to the manipulation of packaging with fine hand use such as opening/closing.
	Aging effects	Reduced abilities for most of the physical functions with age.	
Cognition	Cognitive disabilities	A person who has difficulty in intellectual activities such as calculation, reading/writing, and communication. Occurred in the development stage and associated with various types of disabilities such as ADHD (attention deficit hyperactivity disorder) and LD (learning disorder), etc.	Reduced abilities for memory, attention and learning. Difficulty in reading, writing, understanding and communication.
	Aging effect	Slight or moderate degree of disabilities for most of the cognitive functions.	

Annex B (informative)

Appropriate dimensions of tactile markings

Table B.1 — Dimensions of major types of tactile marking

Type of symbols	Dimension	Description	Remarks
Dots	Diameter	0,8 mm to 2,0 mm	ISO 24503
	Height	0,4 mm to 0,8 mm	
Bars	Width	0,8 mm to 2,0 mm	
	Length	5× to 10× of the width	
	Height	0,4 mm to 0,8 mm	
Symbols	Size	10 mm to 30 mm	
	Line width	about 1/10 of the size	1,5× for older people
Letters (Pictograms)	Size	15 mm to 45 mm	JIS S0052
	Line width	about 1/10 of the size	1,5× for older people
Notches	Size	2,2 mm for triangle shape 6 mm for round shape 10 mm for rectangular	JIS X6310
	Depth	0,8 mm to 1,0 mm	

Annex C (informative)

Designer's checklist

C.1 General

The design advice is meant to be used when designing consumer packages as an example of a designer's checklist. It enables fast screening of relevant basic factors and is intended for packaging designers and developers. The list covers the most important features with regard to information design of consumer packaging. The advices are based on standards, scientific references and best practices.

The design advices are taken from a more extensive document, "Guidance on the Development of Consumer Packaging", Innventia.

C.2 How to use the document

The document consists of a number of statements. The statements support the usability features of a package. Read them through and for each statement, mark with an "x" as to whether or not the package fulfils the statement (Yes or No), or "Not applicable", if not relevant for the package under development.

Some statements are not relevant for some packages, hence the alternative "Not applicable".

If a package consists of more than one part, e.g. an outer and an inner package, treat each part separately.

C.3 Checklist

C.3.1 Context

Statements	Has the requirement been met?	Comments
The context of use including description of the users shall be identified and clearly described before the design starts.	Y/N/Not applicable	See ISO 9241-11 See ISO 20282-1

C.3.2 Information design

Statements	Has the requirement been met?	Comments
Information about how to open, empty/close, reclose and recover shall be placed so that it is easy to find and read.	Y/N/Not applicable	Instructions shall be possible to read without risking product waste and they should be readable without having to twist/turn the package.
Instructions for opening, emptying/closing and resealing shall be possible to read when handling the package.	Y/N/Not applicable	Instructions shall be possible to read without risking product waste and they should be readable without having to twist/turn the package.

Statements	Has the requirement been met?	Comments
The information shall be located with reference to how the package is to be used, i.e. the relevant information can be easily read and understood when the package is being used.	Y/N/Not applicable	Instructions shall be possible to read without risking product waste and they should be readable without having to twist/turn the package.
The text shall be black or dark and printed on a white or light background.	Y/N/Not applicable	
The text/symbols shall be printed on a matte background.	Y/N/Not applicable	Reflection is more apparent on dark and shiny surfaces. (OK?)
Symbols and informative illustrations shall be clear and simple, i.e. they contain few details and the printing contrasts well with the background.	Y/N/Not applicable	Aim for at least a contrast of a minimum of 70 %. On a white surface the colours black, blue, green and red can be used if the contrast requirement is met.
Use a linear font, i.e. one that has clear lines without a "feet" at the bottom.	Y/N/Not applicable	
		
There shall be no running text written only in italics.	Y/N/Not applicable	
There shall be no running text written only in capitals.	Y/N/Not applicable	
The height of the lower case letters shall not be less than 1,5 mm. (Check letters without upstrokes or down strokes, e.g. a, c, or m.)	Y/N/Not applicable	For elderly users, a larger size is recommended.
		
The information shall not be given in colour combinations of red and green, yellow and green or blue.	Y/N/Not applicable	
The information must be designed so that the intended users understand the information.	Y/N/Not applicable	Understanding can be tested using ISO 9186-1.

Annex D (informative)

Checklist for conformance with this document

D.1 Overview

These checklists are to show that the requirements and applicable recommendations from this document have been met.

D.2 General design considerations

Requirements	Has the requirement been met?	How has the requirement been met?
Does the packaging design consider the diverse users for the package?	Y/N/Not applicable	
Does the packaging design consider the diverse context of use for the package?	Y/N/Not applicable	
Are information and marking on packaging presented at least by two different means for users?	Y/N/Not applicable	
Are important information and marking on packaging clearly shown?	Y/N/Not applicable	
Is the amount of information and marking on packaging appropriate?	Y/N/Not applicable	
Is the position of information and marking on packaging appropriate?	Y/N/Not applicable	

D.3 Design considerations required from human abilities and characteristics

Requirements	Has the requirement been met?	How has the requirement been met?
Is contrast between letters/symbols/pictograms and background as high as possible?	Y/N/Not applicable	
Are colours and colour combination more visible and comprehensive than those not using colour?	Y/N/Not applicable	
Are letters, words and sentences on packaging legible for the intended users and intended context of use?	Y/N/Not applicable	
Where graphic symbols and pictograms are used, are they simple, clear, prominent and accessible to those who have difficulties in reading letters?	Y/N/Not applicable	
Are the languages used clear?	Y/N/Not applicable	
Are the tables used consistent and comprehensive?	Y/N/Not applicable	
Is too strong a glare from the surface of packaging avoided?	Y/N/Not applicable	

Requirements	Has the requirement been met?	How has the requirement been met?
Where tactile marking is used, is it large enough to be legible by touch?	Y/N/Not applicable	
Where Braille is used, does the packaging follow ISO 17351, and if possible, is the dot height in the range of 0,3 mm to 0,9 mm?	Y/N/Not applicable	
Where sound is used as feedback information for opening/reclosing, is the sound pressure level large enough to be audible for intended users?	Y/N/Not applicable	

D.4 Design considerations specific to the package

Requirements	Has the requirement been met?	How has the requirement been met?
Are information and marking for opening instructions legible, clear and easy to find?	Y/N/Not applicable	
Will important information and marking not be deleted or destroyed after opening?	Y/N/Not applicable	
Are information and marking for use legible, clear and easy to understand?	Y/N/Not applicable	
Are information and marking for storage legible, clear and easy to understand?	Y/N/Not applicable	
Are appropriate guidance and warnings for storage given?	Y/N/Not applicable	
Are instructions on disposal of packaging, as well as of contents clear?	Y/N/Not applicable	
Is information for contact with suppliers provided?	Y/N/Not applicable	

D.5 Design considerations related to safety

Requirements	Has the requirement been met?	How has the requirement been met?
Are information and marking related to safety in using packages clear and apparent?	Y/N/Not applicable	
Will safety-related information and marking be preserved after opening?	Y/N/Not applicable	

Bibliography

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- [3] ISO 11156, *Packaging — Accessible design — General requirements*
- [4] ISO 11683, *Packaging — Tactile warnings of danger — Requirements*
- [5] ISO 17049, *Accessible design — Application of braille on signage, equipment and appliances*
- [6] ISO 17480:2015, *Packaging — Accessible design — Ease of opening*
- [7] ISO 20282 (all parts), *Ease of operation of everyday products*
- [8] ISO/TR 22411, *Ergonomics data and guidelines for the application of ISO/IEC Guide 71 to products and services to address the needs of older persons and persons with disabilities*
- [9] ISO 24502, *Ergonomics — Accessible design — Specification of age-related luminance contrast for coloured light*
- [10] ISO 24505, *Ergonomics — Accessible design — Method for creating colour combinations taking account of age-related changes in human colour vision*
- [11] ISO/IEC Guide 71, *Guide for addressing accessibility in standards*
- [12] JIS S0052, *Guidelines for older persons and persons with disabilities — Tactile information — Basic design methods for tactile patterns*
- [13] JIS X6310:1996, *Prepaid cards — General specifications*