

SLOVENSKI STANDARD oSIST prEN 16403:2012

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Ravnanje z odpadki - Vidni elementi za označevanje vrste odpadkov

Waste management - Waste visual elements

Abfallwirtschaft - Bildelemente für Abfallfraktionen

Gestion des déchets - Éléments visuels DARD PREVIEW

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EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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English Version

Waste management - Waste visual elements

Abfallwirtschaft - Bildelemente für Abfallfraktionen

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If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (prEN 16403:2012) has been prepared by Technical Committee CEN/TC 183 "Waste management", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

The Annexes A, B, C, D, E and F are Informative.

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Introduction

This standard is aimed to facilitate and make unambiguous the identification of different waste typologies: the value of each material is strictly linked to its purity, so it is necessary to avoid any wrong waste conferring.

To this purpose the present standard defines a unique colour and visual identification elements in all the countries that are CEN members for the main materials subject to separate collection.

Consequently, object of this standard is managing in a tidy and homogeneous way – in terms of quantity and quality – the majority of the municipal waste separately collected. The point is that not all the materials subject to separate collection are taken in consideration in detail (for instance wood, batteries, etc.), because for the first important standardization phase in Europe it would be better to take in consideration the main waste typologies collected in the streets by means of waste containers; the collection of those materials concerns not only the citizens living in a particular city, but also people travelling for different reasons. They should be able to find the same waste visual element in any city.

This document defines various different visual elements defining in different ways a specific waste-material: each person will detect one element better than another element depending on age, eyesight, culture, behaviour.

This standard refers to all the waste containers defined in the EN standards and it is suggested also for all kinds of bins for waste collection. The colours and all the others waste visual elements should be used in any activity: explanatory, advertising and communication for the users and operators.

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1 Scope

This European Standard specifies a way to identify the various fractions of municipal waste by a set of visual elements, including colours, symbols, text.

This standard is intended to create a unique operative model to easily identify the waste from visual elements thereby facilitating collection and recycling/recovery services for both consumers and management companies.

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.

EN 840-1, Mobile Waste Containers – Part 1: Containers with 2 wheels with a capacity from 80 l to 390 l for comb lifting devices – Dimensions and design

EN 840-2, Mobile Waste Containers – Part 2: Containers with 4 wheels with a capacity up to 1 300 l with flat lid(s), for trunnion and/or comb lifting devices – Dimensions and design

EN 840-3, Mobile Waste Containers – Part 3: Containers with 4 wheels with a capacity up to 1 300 l with dome lid(s), for trunnion and/or comb lifting devices – Dimensions and design

EN 840-4, Mobile Waste Containers – Part 4: Containers with 4 wheels with a capacity up to 1 700 l with flat lid(s), for wide trunnion or BG-and/or wide comb lifting devices – Dimensions and design

EN 840-5, Mobile Waste Containers – Part 5. Performance requirements and test methods

EN 840-6, Mobile Waste Containers – Part & Safety and health requirements https://standards.iteh.ai/catalog/standards/sist/4cca0cf1-3711-4fd2-b5aa-

EN 12574-1, Stationary Waste Containers Part to Containers With a capacity up to 10 000 I with flat or dome lid(s), for trunnion, double trunnion or pocket lifting device – Dimensions and design

EN 12574-2, Stationary Waste Containers – Part 2: Performance requirements and test methods

EN 12574-3, Stationary Waste Containers – Part 3: Safety and health requirements

EN 13071-1, Stationary waste containers up to 5 000 l, top lifted and bottom emptied – Part 1: General requirements

EN 13071-2, Stationary waste containers up to 5 000 l, top lifted and bottom emptied – Part 2: Additional requirements for underground or partly underground systems

EN ISO 14021, Environmental labels and declarations – Self-declared environmental claims

3 Terms and definitions

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

3.1

stationary waste container

appropriately designed containers with a capacity up to 10 000 litres with flat or dome lid(s), for trunnion, double trunnion or pocket lifting device, without wheels or fitted with them, for positioning empty containers only, to temporarily store waste, according to EN 12574

3.2

mobile waste container

appropriately designed mobile waste containers with 2 wheels with a capacity up to 400 litres for comb lifting devices and Mobile waste containers with 4 wheels with a capacity up to 1 300 litres with flat lid(s), for trunnion and/or comb lifting devices, according to EN 840

3.3

stationary waste containers top lifted and bottom emptied

appropriately designed stationary waste containers up to 5.000 litres, top lifted and bottom emptied, according to EN 13071-1

EXAMPLE Waste Bank, Igloo

3.4

underground or partly underground system

system whose emptying device is located below surrounding ground level at any point, with an appropriately designed container to collect/receive the waste totally or partially under the level of the ground, according to EN 13071

3.5

separate collection

collection of different kinds of waste segregated at source

3.6

waste visual element

wve set of typical graphic elements with shapes, colours and contents predefined, that consent unambiguous identification of a waste-stream (standards.iteh.ai)

3.7

waste-fraction, noun

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single type of waste products made in the same material ndards/sist/4cca0cf1-3711-4fd2-b5aa-

dd8aa6c8d772/ksist-fpren-16403-2014

EXAMPLE PET bottles, aluminium cans, steel drums, jar glass

3.8

waste-material, noun

single waste-material including one or more different waste-fractions

EXAMPLE different plastics for shapes, manufacturing and polymers but all made in plastic

3.9

prevalent waste-material

waste-material that occupies the major volume inside a waste container in case of joint collection of two or more waste-materials

3.10

waste-stream, noun

different waste-materials and/or different waste-fractions collected in the same waste container

3.11

waste-colour, noun

colour in the Classic System of RAL that indicates a waste-material (or the prevalent waste-material) or waste-stream

3.12

WVE-panel or waste-panel, noun

stiff or flexible support to be fixed on the waste container with the waste visual elements on it

3.13

waste-frame, noun

typical graphic element constituted by a continuous closed line with the form of a rectangle with round angles to delimitate the different areas in a WVE-panel

3.14

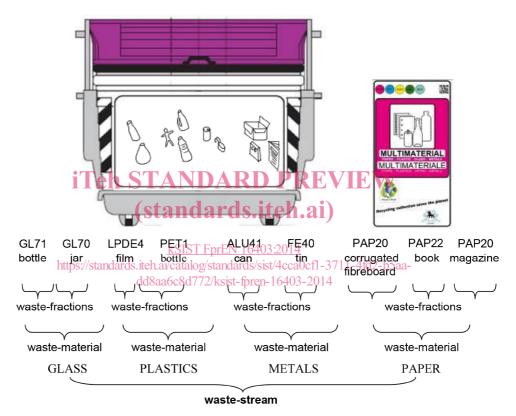
waste-logogram, noun

typical graphic element constituted by a simple drawing(s) that characterizes in an unambiguous way a wastefraction or various waste-fractions or a waste-material

3.15

coloured part of waste container, noun

part(s) of a waste container coloured with the correct colour identifying the type of waste-material or of wastestream (see Figure 1 and Figure 2)



Key

Collection including glass, plastics, metals, paper → collection of four waste-materials → multi-waste-material → waste-colour MAGENTA

Figure 1 — Example A of waste-stream



Key

Collection including plastics and metals \rightarrow plastics is a waste-material including various waste-fractions of plastics for instance PET and PE; and metals is a waste-material including various waste-fractions as aluminium and tin plate, steel \rightarrow prevalent waste-material is plastic \rightarrow waste-colour YELLOW

Figure 2 — Example B of Waste-stream

3.16 QR-Code

QR-Code is a matrix barcode (or <u>http://en.wikipedia.org/wiki/Barcode - Matrix .282D.29 barcodes</u>twodimensional code),<u>http://en.wikipedia.org/wiki/Machine-readable medium</u> readable by QR scanners, mobile phones with a camera, and smart-phones. The code consists of black modules arranged in a square pattern on white background. The information encoded can be text, URL or other data. In one cryptogram there are 7 089 numerical characters and 4 296 alphanumerical

3.17

management company

company responsible for the selective collection of municipal waste in the streets

4 Principles

This standard identifies four compulsory visual elements: colours, QR-code, logograms, texts, which shall be indicated on a panel called "waste-panel". Such panel shall be clearly visible on each container for the separate collection of waste and can take the desired size provided that it respects the proportions given in this standard.

The lower part of the waste-panel is a "free area", that means it is at somebody's disposal as, for example, for the logos of the city, the service company, the public utility, slogans and images.

This standard uses thirteen colours accurately identified by RAL and also indicated in Pantone scale, in order to facilitate the graphic designers' activity, as follows:

- Two "Contrasting colours": Black and White for optimum contrast between background and signs on the waste-panel;
- Two "Auxiliary colours": Red and Orange, respectively, for Hazardous waste and Toxic and Harmful waste to allow the immediate danger perception to children and to the visually impaired;
- Nine "Waste-colours": six are for specific materials (Blue for paper, Turquoise for metals, Green for glass, Yellow for plastic, Brown for bio waste, Bordeaux for WEEE), Grey is for mixed waste, Magenta is for multi-material and Beige is for all the others materials separately collected.

The colours are called with only one single word "One Word Colour" (without adjectives).

This standard is based on the following concepts:

- The concept of "prevalent material" allows to easily understand and to pick which colour shall be used in case of collection of two or more materials; that is in case that one material has a prevalent volumetric quantity compared to the other materials;
- The concept of "secondary waste-colour" is useful to divide the materials into subsets, such as green, brown and white glass;
- The concept of "coloured-parts" allows the appropriate design of new containers and, at the same time, allows to reuse the existing containers. Each container can be completely realized in the colour of the corresponding waste or it can have coloured parts (for example, the cover or the frames around the openings). The coloured-parts shall always allow for the immediate understanding of all-aged and all-language persons.

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5 The Waste Visuals Elements/catalog/standards/sist/4cca0cf1-3711-4fd2-b5aa-

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5.1 Colours

The waste-colours shall be used respecting the following Tables.

The waste-colours are indicated according to the Classic System RAL scale.

It is also indicated, as a suggestion, the Pantone colour a lot alike RAL in order to facilitate graphic realization.

The colours are indicated in detail for production of waste-panels and for the coloured-parts of a waste container.

In the following Tables 1 to 6 it is indicated in the first column a "One Word Colour" for an easy indication of the type of waste-material.

5.1.1 Contrasting Colours

The Contrasting Colours shall be used to realize the waste-panels and only for specific purposes (see Table 1).

One Word Colour	Main reference: RAL code RAL name	Secondary reference: Pantone colour	Main Application	Secondary Application
White	RAL 9003 Signal White	Pantone White	waste-panel background	waste- fraction: White Glass
Black	RAL 9017 Traffic Black	Pantone Black	waste-frame, text for waste-panel, waste- logogram	///

 Table 1 — Contrasting Colours

5.1.2 Auxiliary colours for hazardous waste and for toxic and harmful waste

The specific colours for hazardous waste and for toxic and harmful waste that shall be used are indicated in the following Table 2. **Teh STANDARD PREVIEW**

Table 2 — Auxiliary colours for	or Hazardous waste and for Toxic and Harmful waste
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One Word Colour	Main reference: RAL/Code ards.iteh.ai/ca RAL name dd8aa6c	Secondary IST EprEN 16403:2014 trieference is/sist/4cca Pantone colour ⁴⁰¹		Secondary Application
Red	RAL 3020 Traffic Red	Pantone 032 C	Danger signals for hazardous waste	///
Orange	RAL 2008 Bright Red Orange	Pantone 1585 C	Danger signals for toxic and harmful waste	///

5.1.3 Waste-colours

The waste-colours are the colours that characterize a single waste-material or a waste-stream (group of various waste-materials).

The waste-colours that shall be used are indicated in the following Table 3.

Table 3 — Waste-colours

Waste-colours	Main Application	Secondary Application
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