

KAUCJA PL

GUIDELINES FOR DRS PACKAGING

A set of guidelines covering packaging specifications, EAN barcodes, and DRS marking in Poland.

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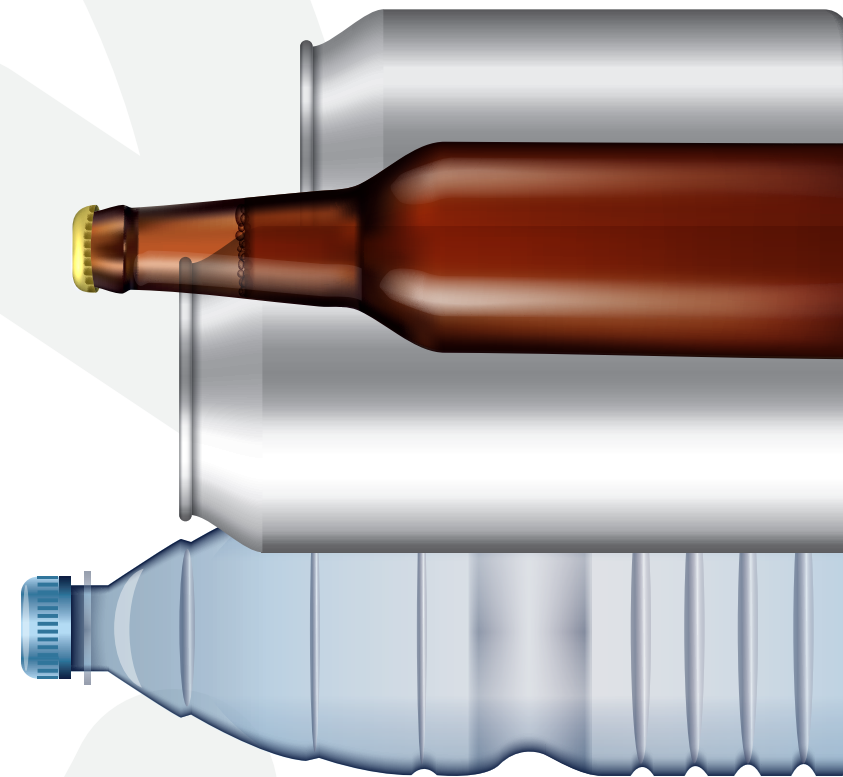


About Kaucja.pl:

It is the entity representing the group established by leading beverage producers in Poland: Coca-Cola HBC Polska, Colian, Grupa Maspex, Nałęczów Zdrój, Nestlé Polska, Oshee Polska, PepsiCo Polska, Red Bull, Van Pur, Zbyszko Company and Żywiec Zdrój. The company was established to ensure that producers fulfill their obligations related to the collection of DRS beverage packaging. We invite beverage producers, retail chains, stores, and all DRS stakeholders to cooperate, while also promoting environmental education and sustainable development.

1. Purpose

The document contains requirements and recommendations regarding packaging for Deposit-Refund System (DRS) in Poland. Familiarity with and adherence to the requirements are key to the effective integration of deposit-packaged products and their proper identification by the system during refund. Compliance with the recommendations is not mandatory; however, failure to consider them may result in incorrect packaging recognition.



2. EAN barcodes

Types of barcodes: EAN-13 and EAN-8 barcodes, standardized in accordance with the SR ISO/IEC 15420 standard, are accepted. They are industry standards and enable the unambiguous identification of products within the DRS. Products marked with UPC (Universal Product Code) should be avoided.

Compliance with GS1 standards: All EAN barcodes must comply with the GS1 guidelines outlined in the “GS1 General Specifications”, concerning:

- sizes,
- colors,
- contrasts,
- proportions,
- quiet zones,
- print quality.

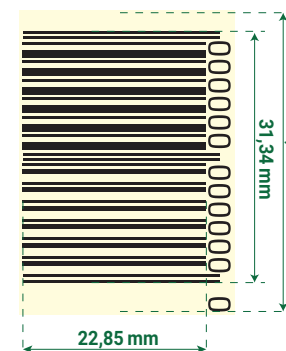
These rules ensure that the barcodes will be unambiguously readable by scanning systems.

Size: The dimensions of EAN barcodes are strictly regulated by the aforementioned GS1 guidelines:

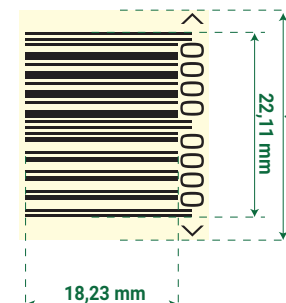
- EAN-13:
 - Nominal size: 37.29 mm x 22.85 mm
 - Minimum size: 29.83 mm x 18.28 mm
- EAN-8:
 - Nominal size: 26.73 mm x 18.23 mm
 - Minimum size: 21.38 mm x 14.58 mm

GRAPHIC: DIMENSIONED EAN-8 AND EAN-13

EAN-13



EAN-8



Scaling range: Barcode must be printed at a scale ranging from 80% to 115% of its nominal size. The optimal sizes range from 100% to 115% to ensure the best readability.

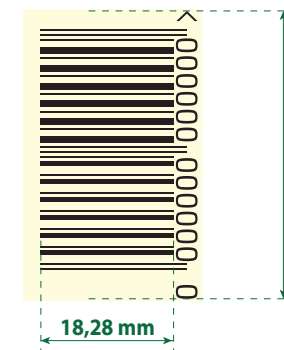
The minimum dimensions of barcodes must not be less than 90% of the width and 80% of the height. The given value applies to barcode positioned horizontally.

TABLE: Permissible magnification ratios and exact dimensions of EAN-8 barcodes

Scale factor	Module width (ideal) [mm]	EAN-13 [mm]		EAN-8 [mm]	
		WIDTH	HEIGHT	WIDTH	HEIGHT
0,80	0,264	29,83	18,28	21,38	14,58
0,85	0,281	31,70	19,42	22,72	15,50
0,90	0,297	33,56	20,57	24,06	16,41
0,95	0,313	35,43	21,71	25,39	17,32
1,00	0,330	37,29	22,85	26,73	18,23
1,05	0,346	39,15	23,99	28,07	19,14
1,10	0,363	41,02	25,14	29,40	20,05
1,15	0,379	42,88	26,28	30,74	20,96

GRAPHIC: The minimum barcode size is 90/80 in both horizontal and vertical orientations.

EAN-13



EAN-8

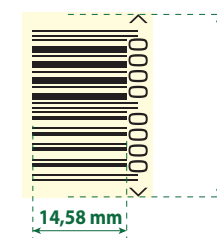


TABLE: Permissible magnification ratios and exact dimensions of EAN-13 barcodes

Reduce/enlarge factor	Ideal width of the element x [mm]	White field on the left [mm]	White field on the right [mm]	TOTAL width including white fields [mm]	Width from the first to the last line of code [mm]	Height with numbers [mm]	Height of line without numbers [mm]	Line height to bottom of longest line [mm]	ORIENTATION
80%	0,264	2,904	1,848	29,83	25,08	20,73	18,28	19,600	Vertical
85%	0,281	3,091	1,967	31,70	26,64	22,02	19,42	20,825	Vertical
90%	0,297	3,267	2,079	33,56	28,21	23,32	20,57	22,050	Vertical
95%	0,313	3,443	2,191	35,43	29,80	24,61	21,71	23,275	Vertical
100%	0,330	3,630	2,310	37,29	31,35	25,93	22,85	24,500	Vertical/ Horizontal
105%	0,346	3,806	2,422	39,15	32,92	27,21	23,99	25,725	Vertical/ Horizontal
110%	0,363	3,993	2,541	41,02	34,49	28,50	25,14	26,950	Vertical/ Horizontal
115%	0,379	4,169	2,653	42,88	36,06	29,80	26,28	28,175	Vertical/ Horizontal

TABLE: Permissible magnification ratios and exact dimensions of EAN-8 barcodes

Reduce/enlarge factor	Ideal width of the element x [mm]	White field on the left [mm]	White field on the right [mm]	TOTAL width including white fields [mm]	Width from the first to the last line of code [mm]	Height with numbers [mm]	Height of line without numbers [mm]	Line height to bottom of longest line [mm]	ORIENTATION
80%	0,264	1,848	1,848	21,380	17,680	17,050	14,688	15,904	Vertical
85%	0,281	1,967	1,967	22,720	18,790	18,110	15,606	16,898	Vertical
90%	0,297	2,079	2,079	24,060	19,900	19,180	16,524	17,892	Vertical
95%	0,313	2,191	2,191	25,390	21,010	20,240	17,442	18,886	Vertical
100%	0,330	2,310	2,310	26,730	22,120	21,310	18,360	19,880	Vertical/ Horizontal
105%	0,346	2,422	2,422	28,070	23,230	22,380	19,278	20,874	Vertical/ Horizontal
110%	0,363	2,541	2,541	29,400	24,320	23,440	20,196	21,868	Vertical/ Horizontal
115%	0,379	2,653	2,653	30,740	25,430	24,510	21,114	22,862	Vertical/ Horizontal

2.1. Placement of EAN barcodes

The placement of the barcode should comply with Chapter 6 of the document 'GS1 General Specifications'. The barcode must not be placed on packaging elements exposed to damage during use, such as caps or easily removable labels. The location should ensure the durability and accessibility of the barcode throughout the entire lifespan of the packaging. Different barcodes must not appear on the same packaging. In the case of packaging with a small diameter, such as cans, it is strongly recommended to place EAN barcode “on the side”, in a ladder format.

For each product introduced into DRS, the use of a new, unique EAN barcode is required. This barcode must not have been used previously nor be currently used for a version of the product not covered by DRS. In the case of using a barcode already used in other markets, it is necessary to agree on this with Kaucja.pl. The unique barcode ensures the correct identification of DRS packaging. This eliminates the risk of refunding DRS fee for packaging for which the fee was not charged.

2.1.1. Change of EAN barcode/GTIN number

If filler or importer plans to change EAN barcode/GTIN number on the packaging, consultation with Kaucja.pl is required. Consultation is also required in cases where the following changes occur:

- material used for production (excluding the ratio of rPET to PET),
- any dimension exceeding 20%,
- mass change of more than 10%.

GS1 Specification

<https://www.gs1.org/standards/log>

2.2. Recommendations regarding EAN barcode

PLACEMENT EAN barcode should be placed:

- vertically (in a ladder format), which significantly facilitates correct barcode reading by Reverse Vending Machine,
- on a surface as flat as possible, resistant to moisture,
- 0 closer than 10 mm from edge of packaging.

COLOR SCHEME It is recommended to use colors that contrast as much as possible, with a preference for black EAN barcode on a white background.

INCLINATION The angle of inclination of EAN barcode relative to the packaging axis should not exceed 10 degrees.

MAGNIFICATION In the case of placing EAN barcode on inclined surfaces, such as a bottle neck, it is recommended to magnify it to at least 100% of its nominal size, in accordance with GS1 standards.

LABEL MATERIAL The label should be made of a durable material that does not deform, such as wrinkling, which would affect the readability of EAN barcode.

EAN BARCODE To ensure the smooth operation of DRS in Poland, each product should be marked with a unique EAN barcode designated exclusively for this DRS.

NEW BARCODES FOR COLLECTIVE PACKAGING For operational and reporting reasons, it is recommended to change the EAN barcodes for collective sales packaging containing DRS packaging.

3. DRS Mark

3.1. Requirements

The marking is usually not scanned by Reverse Vending Machines or handheld scanners, but it plays an important role in communication with individual users of DRS.

According to the law introducing the deposit system, each packaging belonging to it must be marked with marking indicating its inclusion in DRS and specifying the amount, in accordance with following format:

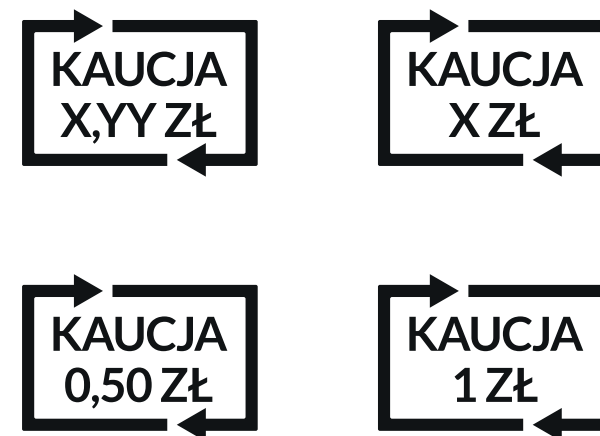
Marking should:

1. be clear, visible, legible, and durable;
2. contrast with the background;
3. be located on the label.

From the launch on October 1, 2025, DRS fee shall be PLN 0.50 for metal beverage cans and plastic bottles and PLN 1.00 for refillable glass bottles. The vector and text version of DRS mark with the deposit amount can be found on Ministry of Climate and Environment website: <https://www.gov.pl/web/klimat/oznakowanie-opakowan-w-systemie-kaucyjnym>

When preparing the packaging design, we recommend using the fully vectorized version of DRS mark available in the Kaucja.pl resources at the following address: <https://kaucja.pl/do-pobrania/>

GRAPHIC: Marking of DRS packaging



X,YY – represents DRS amount, where X denotes the whole zloty and YY denotes the grosz;

X – denotes the deposit amount in full zlotys.

3.2. Recommendations

DRS mark on packaging should effectively and unambiguously indicate its inclusion in the system, helping consumers to recognize such packaging. To ensure the readability of DRS mark, a minimum size of 1.4 mm for the capital letter/number in the mark should be maintained. At this font size, the height is 8.3 mm, and the width is 11.7 mm. It is recommended that the DRS mark be placed directly near the EAN barcode, ideally directly above it. The recommendations also include a quiet zone around the DRS mark, the minimum value of which should be no less than half the height of the arrowhead.

In the case of using markings of multiple DRS packaging distributed in multiple markets, the polish DRS mark should be placed next to the other DRS marks in the immediate vicinity of EAN barcode.

Deviations from the above recommendations may lead to incorrect identification of the packaging by the consumer as not being part of DRS.

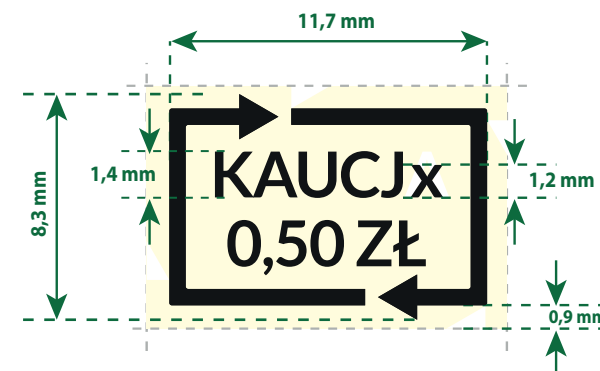
3.2.1. Font

There are no clear regulations specifying the type and minimum font size of the text in DRS mark. From the hybrid version of DRS mark provided by the Ministry of Climate and Environment, it is known that a free Polish font called Lato-Bold has been used. It is recommended to use a font with a capital letter height of no less than 1.4 mm and proportional width.

GRAPHIC: DRS mark in the variant of PLN 0.50 and PLN 1.00.



GRAPHIC: Minimum DRS mark dimensions: width, height, quiet zone, font size

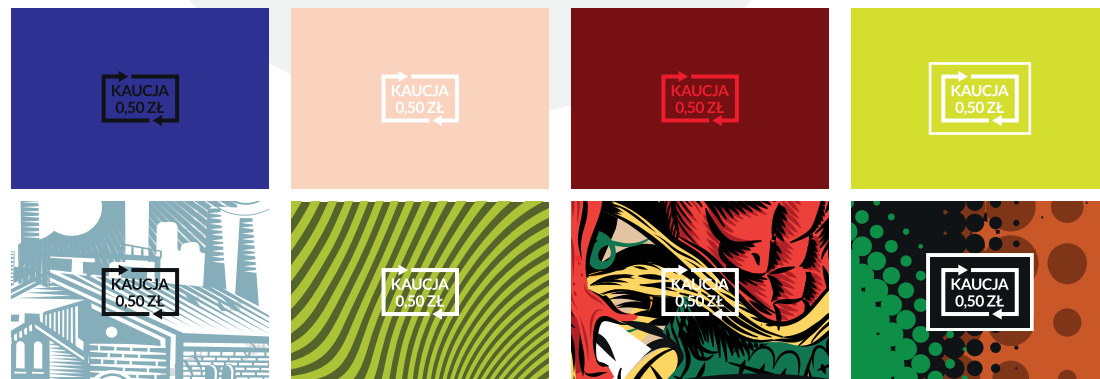


3.2.2. Color scheme

The applicable regulations state that DRS mark should “contrast with the background”. Due to the recommended placement of the mark in the immediate vicinity of EAN barcode, it is suggested to use a color scheme that matches that of the barcode. In exceptional cases, the color scheme of DRS mark can be adjusted to match the color of the text presenting the legally required sensitive information, provided that the graphic design remains in compliance with the legal background contrast requirements.



GRAPHIC: Examples of accepted color solutions



GRAPHIC: Examples of unacceptable color solutions

3.2.3. Placement on colored backgrounds

In cases where DRS mark is placed on colored backgrounds or substrates, it is recommended to use a solid-colored background to avoid illegibility caused by additional borders or complex background patterns. The mark should always be clear and easily recognizable. This is possible by maintaining an appropriate contrast with the background, without unnecessary borders. Using additional colors as the background for the mark is allowed, provided they comply with the contrast requirements. Use of self-adhesive labels with DRS logo is allowed as a temporary solution when printing on packaging is not possible.

3.2.4. Stickers

Stickers may be used on all DRS packaging, including imported ones, and their application must not obscure important markings such as EAN barcode (except for changes to EAN barcode), product name, ingredient information, allergens, alcohol content, or volume. Each sticker must be resistant to external factors and provide clear, visible, and durable marking of DRS. One way to minimize the negative impact on the recyclability of packaging is to minimize the weight of the stickers used – for this reason, the weight of the stickers should not exceed 5% of the packaging weight.



4. Packaging shape

4.1. Requirements

The following will be included in polish DRS:

- single-use plastic bottles with a capacity of up to 3 liters,
- refillable (multi-use) glass bottles up to 1.5 liters,
- metal (aluminum and steel) beverage cans with a capacity of up to 1 liter.

The edges of packaging must be safe and not pose a threat to individuals handling their manual collection, as well as safe for sorting machines, including Reverse Vending Machines.

4.2. Recommendations

It is recommended to adhere to the specified parameters regarding the external dimensions of packaging.

If packaging dimensions exceed any of the values specified in this point, it is recommended to consult Kaucja.pl in advance.

The packaging dimensions should be proportioned to ensure that the height is at least 1.4 times the width. It is recommended to round the edges of the packaging so that it can rotate freely in Reverse Vending Machine during the EAN barcode reading. Additionally, it is important that the center of gravity of packaging is positioned in a way that allows packaging to be stably placed in a horizontal position on a flat surface.

TABLE: The diameter of packaging (measured as the outer width of packaging at its widest point):

for plastic bottles	ranging from 50 to 130 millimeters
for metal beverage cans	ranging from 50 to 100 millimeters
for refillable glass bottles	ranging from 50 to 130 millimeters

TABLE: Height of packaging (including cap):

for plastic bottles	ranging from 80 to 360 millimeters
for metal beverage cans	ranging from 80 to 200 millimeters
for refillable glass bottles	ranging from 80 to 360 millimeters

5. Change of marking after joining DRS

After DRS joining, it is recommended to make changes to the marking of products in DRS packaging:

Tidyman mark

It is recommended to remove this symbol from packaging to avoid misleading consumers. The “Tidyman” symbol, suggesting disposal into a trash bin, may be misleading in the context of DRS, which promotes return of packaging to collection points.

Green Dot mark

It informs about the producer's participation in the recovery and recycling system; their presence on packaging marked with DRS symbol is not required.

The decision to remove both marks and use different marking is at the discretion of the producer. The marking patterns indicating the types of materials from which the packaging is made are regulated by the Regulation of the Minister of the Environment on the patterns of packaging marking of September 3, 2014. (Journal of Laws of 2014, item 1298).

GRAPHIC: Tidyman mark



GRAPHIC: Green Dot mark



6. Packaging materials

When selecting materials for packaging production, both technical and environmental criteria should be taken into account. Packaging should be made of materials that are not only durable and safe for everyday use but also easy to process after their useful life. Recommended materials are:

6.1. Aluminum and Steel The system supports beverage cans made of aluminum, as well as those made from a combination of a steel (body) and aluminum (end). Cans containing “widgets” – small containers with nitrogen released upon opening – are acceptable, but prior consultation with Kaucja.pl is recommended.

6.2. PET (Polyethylene Terephthalate) PET bottles, both transparent and colored, are accepted by the system. EU Directive 2019/904 on reducing the impact of certain plastic products requires that, from 2025, all PET bottles used for beverages must contain at least 25% recycled materials, and from 2030, at least 30% on average.

6.3. HDPE (High-Density Polyethylene) HDPE bottles, both transparent and colored, are accepted by the system.

6.4. Szkło Refillable glass bottles made of glass are accepted by the system.

When choosing packaging, the thickness of its walls should be taken into account. An excessively thick and rigid PET bottle, HDPE bottle, or steel can may block compression systems of Reverse Vending Machines.



CHANGE TABLE:

1.0	Initial version of the document: October 31, 2024.
1.1	Graphic changes: November 8, 2024.
1.2	Correction of the typographical error regarding the interchange of the width and height of the deposit mark and clarification. November 19, 2024.
2.0	Revision: February 2025.

GRAPHIC:

layout of the publication, graphic design, an increased number of excerpts, and examples of accepted and non-accepted cases. Table format.

CONTENT-RELATED:

Deposit marking: minimum dimensions specified to one decimal size.

Barcodes: angle of inclination of EAN barcode relative to the packaging axis, required use of unique codes, and no acceptance of UPC (Universal Product Code) codes.

Packaging weight: change in the value subject to the reporting obligation.

Beverage cans: Kaucja.pl brandbook is in line with RECAL Foundation guidelines developed with aluminium beverage cans manufacturers.

TEXT-RELATED:

- Text shortening.
- Changes in sentence structure.
- Changes in inflection and punctuation.
- Information about the initiative and shareholders of Kaucja.pl.

GUIDELINES PARTNERS



FOUNDATION FOR RECOVERY
OF ALUMINIUM PACKAGING

