# GS1 Data Source/CDB

## Specifications and usage rules for product images in the food, health and beauty and DIY, garden and pets industries in the Benelux

*Release 1.5.1, Ratified, 3 September 2019*

## Document Summary

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## Log of Changes

| Release | Date of Change | Changed By | Summary of Change |
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| 1.0 | 25 September 2018 | | First harmonised version based on specifications for the individual industries. |
| 1.1 | 6 December 2018 | Reinier Prenger | The 2:3 aspect ratio is valid for both horizontal and vertical dimensions. The text in paragraphs 1.1 and 2.4 therefore changed to 2:3 and 3:2. |
| 1.2 | 22 March 2019 | Reinier Prenger | The following changes are made (also due to the fact of a new release of the international GS1 standard guideline):<br>- Mobile Ready Hero Images added.<br>- Contradiction with alpha channels solved.<br>- Position 17 of file naming convention now has an explanation.<br>- Example added for naming convention table. |
| 1.3 | 8 May 2019 | Reinier Prenger | The following changes are made:<br>- In paragraph 1.1 and 2.4 the mm's removed.<br>- Corrected position 17 of the GDSN naming<br>- For the sequence number the term numeric characters replaced by numeric digits.<br>- In all examples in the name the A replaced by a C (high resolution)<br>- Corrected the Montage image: 2 pictures over each other<br>- For normal images minimum pixels changes from 2400 to 2401.<br>- In chapter 2.5 in NB(1) the word preference removed. |
| 1.4 | 27 June 2019 | Reinier Prenger | The following changes are made:<br>- In paragraph 2.6.1 (white boxes) the text has been changed.<br>- On page 18 the file name extension of the example is changed from jpg to tiff.<br>- In the naming table (3.1) for the codes A and C the maximum changed from – into to.<br>- In paragraph 2.2 (9th dash) the word about removed.<br>- In paragraph 2.3 added that for an automatic clipping path a margin is needed.<br>- Image in paragraph 2.4 improved. |

| Release | Date of Change | Changed By | Summary of Change |
|---|---|---|---|
| 1.5 | 19 August 2019 | Reinier Prenger | The following changes are made:<br>- Properties in 1.1 enhanced.<br>- Added in paragraph 1.2 (product view) a reference to file naming.<br>- Paragraph 2.4 enhanced.<br>- Paragraph 2.6.1 enhanced.<br>- Codes 7 and 8 added to table 3.1, field 17 for file type L.<br>- Code N added to table 3.1, field 19. |
| 1.5.1 | 2 September 2019 | Reinier Prenger | Typo solved in 1.1, subject File naming. |

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# Introduction

With the growth in online marketing and sales good product images have become far more important to generate more sales and reduce returns. The numbers of product images required are also increasing. Organising and exchanging images is not always a smooth process, however: without a standard image format, the sharing of image files has been difficult and inefficient. Representatives of the food, health and beauty and the DIY, garden and pets industries have therefore agreed a standard way of exchanging product images.

Product images serve three main purposes:

- Shelf management images
- Images for e-commerce purposes (websites)
- Images for printed media (advertising leaflets, posters)

## What are the specifications and usage rules for exchanging images?

GS1 provides specifications and usage rules for exchanging product images with organisations in the food, health and beauty and the DIY, garden and pets industries.

The specifications and usage rules set out how images can be created, associated and exchanged between trading partners. We also set out a standard for the uniform file naming of images. This makes it clear to everyone what image (and representation) is being referred to without opening the document.

- From 1 November 2018 it will be mandatory for food , health and beauty to add one straight-on front shot of a product to its GTIN.
- The standard method for exchanging product images was also submitted to the Belgian FMCG industries but was not fully approved. The differences from the standard method for Belgium & Luxembourg are set out in footnotes to 1.1.
- These guidelines apply to DIY, garden and pets industries from 1 October 2018.

## Using the specifications and usage rules

There is a transitional period for both industries. New products (with GTINs issued after 1 October 2018) can be photographed using these new guidelines. The old standard may be used until 1 January 2020. Photos taken before 2020 using the old standard may still be used after 2020 and need not be retaken. New photos taken in or after 2020 must comply with the new standard.

Only the image of the latest version of a product is exchanged. In the case of a promotional/temporary packaging (e.g. a World Cup promotion) the promotional packaging is only temporarily the latest version; after the promotion ends the latest version reverts to the normal image.

Unless explicitly stated, the rules apply to both the commercial (online/offline) exchange of images and to shelf management.

This document is designed for suppliers and retailers, but it also provides a framework for others supplying services to them. These guidelines are based on the existing GS1 standard, i.e. the GS1 Product Image Specification, see *GS1 Product Image Specification*.

# 1 Summary

The same specifications for the exchange of images apply to the food, health and beauty and the DIY, garden and pets industries. The only differences between the two are in the view of the images, depending on the products (see 2.7.2) and in a small number of visual specifications.

## 1.1 Specifications that apply both industries

The product image specifications for both industries are summarised below.

**Properties:**

| | |
|---|---|
| Image size: | Minimum 2,401 pixels, maximum 4,800 pixels for normal products<br>1,200 pixels for products smaller than 12 cm<br>900 pixels for products smaller than 6 cm |
| File resolution: | 300 dpi |
| File format: | TIF or TIFF[1] |
| File compression: | LZW[2] |
| File colour space: | RGBA (8 bit per channel, Adobe 1998 colour space)[3] |
| Background: | Transparent, this means exactly one alpha channel |
| Aspect ratio: | 2:3 and 3:2 (rectangular)[4] |
| Margin: | 2.5% on all sides, calculated per side |
| Border: | No white border[5] |
| Clipping path: | Yes, with name 'Path 1' |
| File naming: | GTIN based (see paragraph 3.1) |

## 1.2 Differences between the industries

**Food, health and beauty**

**Product view:**

| | |
|---|---|
| View: | At least one straight-on front shot, except for a few products (see 2.6.1). For file naming see paragraph 3.1. |
| Plunge angle: | 0º |

**Visual specifications:**

| | |
|---|---|
| Barcode: | If there is a specific barcode, e.g. in the case of pre-packed variable weight items with a price or weight in the barcode, remove it. |
| Best Before/Expiry date: | Remove if present |
| Variable weight: | Remove if present |

**DIY, garden and pets**

**Product view:**

| | |
|---|---|
| View: | See paragraph 2.6.2 |
| Plunge angle: | 30º side view, 10-15º top view |

[1] The Belgium & Luxembourg FMCG industry also accepts JPG/JPEG and PNG.
[2] The Belgium & Luxembourg FMCG industry also accepts ZIP or uncompressed.
[3] The Belgium & Luxembourg FMCG industry also accepts RGB or sRGB.
[4] The Belgium & Luxembourg FMCG industry also accepts other aspect ratios.
[5] The Belgium & Luxembourg FMCG industry also accepts images with a white border unequal to 2.5% of the narrowest side.

# 2 Product image specifications

All sorts of combinations of file format, resolution and size are used in end-user applications. It is not feasible to cover all the possible combinations with separate images. These specifications are assumed to be suitable for a variety of uses, including printed matter and websites.

## 2.1 Identifying the primary face

For the correct identification of products with multiple marketing faces it is important to identify which is the primary. To resolve this, refer to the existing standards for determining the default front found in the *GDSN Package Measurement Rules Standard*, from which the following excerpt is taken:

'For the purposes of this standard, the Default Front is the surface with the largest area that is used by the manufacturer to "sell" the product to the consumer, in other words, the surface with markings such as the product name and standard text elements such as Consumer Declaration (e.g. Net Content)…'

There is an exception in the case of products with more than one equally large front face, as these products can be presented both vertically and horizontally on the shelves. An image of both front faces is therefore required in these cases.

**Note:** if the method of determining which is the front face for the image based on the measurement rules would be illogical, the manufacturer should decide which is the best front face.

## 2.2 Guidelines for image quality

The aim of the product image is to show the genuine product as true to life as possible. The following recommendations therefore apply to the capture and processing of good-quality images:

- Colour-accurate image.
- Realistic reflections.
- Realistic, neutral shadows.
- Retouching (e.g. removing expiry dates) should be done as seamlessly and invisibly as possible.
- A rendered image (converted from 3D to 2D) is permitted.
- Large depth of field so that the whole product is in focus.
- Even lighting.
- Mirroring is permitted if the product is symmetrical.
- Place the product in the centre, with a margin of 2.5%, either at the top and bottom or left and right, depending on the product. In the case of a milk carton, for instance, it will be at the top and bottom, in the case of a loaf of bread at the left and right.
- The aspect ratio (the ratio between the width and height of an image) should be based on the proportions of the product.
- No weight or barcode on images of variable weight products.
- The product shown on the image must be the same as the product that is being sold.
- Transparent background.
- Not permitted:
  - Colour casts.
  - Alpha channels (enabling a product to be reproduced partially translucent, only one is allowed for transparent background) or layers, guides or rulers.
  - Transfer functions or PostScript colour management.
  - Visible scratches, dust, dents, damage or fingerprints.
  - Artificial reflections or reflections of objects outside the product.
  - Artificial shadows or shadows of objects outside the product.
  - Signatures, 'finger printing' or visible watermarks.
  - Images scanned from printed pages.
  - Compression artefacts (non-lossless compression changes transitions from sharp to frayed and/or causes blotchy appearance).

- Artificial enlargement (interpolation).
- Moiré patterns (interference patterns due to inadequate sampling of a fine pattern) or another minimisation.
- Year or date (e.g. on a wine bottle), unless the year or date is the reason for the different GTIN.
- Props, persons, animals, aids or other products on the image.
- Product-specific information or transaction data (Best Before date, expiry date, batch number, lot number etc.) on the image, unless this is needed for clarification.
- Price on the image.
- Stickers on the image, e.g. 'Fragile' or 'Special Offer'.

## 2.3 Clipping paths

A clipping path is used to separate an object from its background on an image. It is a collection of vectorised points (anchor points) placed over an image. Ensure that all images contain one active clipping path, properly created, for the product to be silhouetted.
To make a clipping path in an automated way, it is necessary that a margin is present.

Advantages of using a clipping path are:

- Least susceptible to errors.
- Scalability and a nice, flowing margin.
- Can be used in many layouts, editing and animation programs.

To facilitate batch automation, it is very important that the clipping path be named 'Path 1' (note capital letter and space).

The flatness setting (the number of anchor points used to create the clipping path) must be 1 (low resolution).

## 2.4 Image size

It has been decided to exchange high-resolution images in both industries. The minimum number of pixels of the longest side of the product image depends on the physical dimensions of that product.

The image size for the longest side is different for small products:

- Products smaller than 6 cm: 900 - 4800 pixels
- Products smaller than 12 cm: 1200 - 4800 pixels
- Products greater then/equal to 12 cm: 2401 - 4800 pixels

The resolution is 300 dpi.

You should apply the largest value of the three dimensions (height, width and depth) as measurement value.

Also note:

- Image aspect ratio size to be 2:3 or 3:2 (rectangular).
- No white border around the image.
- Image to be free-standing.

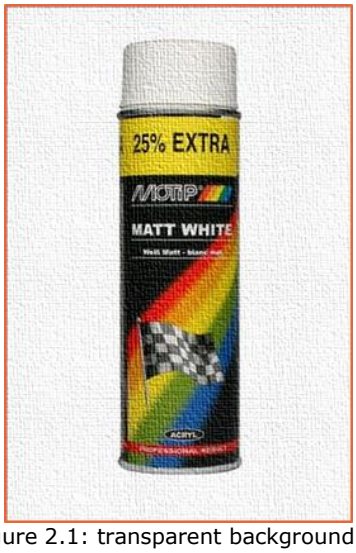



Figure 2.1: transparent background, no white border

## 2.5 File format and colour mode

File format: TIF or TIFF (these are the same) (LZW compressed)
Colour mode: Adobe RGBA
The image should be supplied at the minimum image quality. Your trading partners can then decide for themselves whether to store the images in a different file format, e.g. as JPG or PNG files.

**Note 1:** the storage of the source file is RGBA 8 bit per channel.
**Note 2:** make all backgrounds transparent (exactly on alpha channel).

## 2.6 Product views

There are differences between the two industries here.

### 2.6.1 Product views for food, health and beauty

Multiple images can be exchanged, but it has been decided in this industry to photograph each product at least once straight-on front as sold in the store (packed products in the packaging), with a plunge angle of 0º.

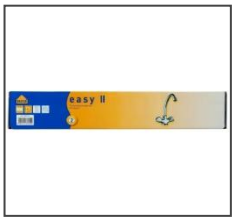
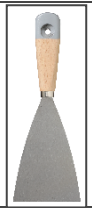

Figure 2.2: straight-on front

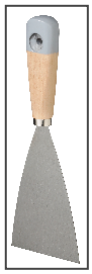
Exceptions:

- **Products with more than one front face** (e.g. front horizontal and back vertical) - an image of each way the product can be placed on the shelf is required.
- **Multi-packs** - it is important for consumers to be able to see that the packaging contains multiple units: this requires a straight-on front shot and a shot taken at a 15º angle from the top left.
- **White boxes** (as used in food service) - the box must be shown with the loose product (e.g. croquette) in front of it.

### 2.6.2 Product views for DIY, garden and pets

At least the following views must be supplied:

| Application | View | Product with packaging – contents also photographable without packaging | Product with packaging – contents not photographable without packaging | Product without packaging |
|---|---|---|---|---|
| Shelf management | | e.g. light bulb, tap | e.g. cement, sand, adhesive | e.g. putty knife, lock |
| | 1. In packaging, straight-on front |  |  | NOT MANDATORY |
| | 2. In packaging, straight-on left |  |  | NOT MANDATORY |
| | 3. In packaging, straight-on top |  |  | NOT MANDATORY |
| | 4. Out of packaging, straight-on front | NOT MANDATORY | NOT MANDATORY |  |

| Application | View | Product with packaging – contents also photographable without packaging | Product with packaging – contents not photographable without packaging | Product without packaging |
|---|---|---|---|---|
| Sales | 5. Out of packaging, straight-on left | NOT MANDATORY | NOT MANDATORY |  |
| | 6. Out of packaging, straight-on top | NOT MANDATORY | NOT MANDATORY |  |
| | 7. Out of packaging, oblique left |  | NOT MANDATORY |  |
| | 8. Out of packaging, oblique right |  | NOT MANDATORY |  |
| | 9. Out of packaging, oblique top |  | NOT MANDATORY |  |

| Application | View | Product with packaging – contents also photographable without packaging | Product with packaging – contents not photographable without packaging | Product without packaging |
|---|---|---|---|---|
| | 10. In packaging, oblique left | NOT MANDATORY |  | NOT MANDATORY |
| | 11. In packaging, oblique right | NOT MANDATORY |  | NOT MANDATORY |
| | 12. In packaging, oblique top | NOT MANDATORY |  | NOT MANDATORY |

Table 2.1: minimum representations to be supplied

**Note 1:** to make some products recognisable it is also necessary to supply an image of the back or underside. This is the case, for example, with three-piece suites, switches and top-class products. The same applies to products that need to be shown in use to clarify what the product does.

**Note 2:** the 'oblique' angle is 30º for side views and 10-15º for top views. For side views there is a tolerance of 10º at the top and bottom (i.e. between 20º and 40º is permitted).

### 2.6.3 Incompatible products

Some products would seem to be incompatible with the above-mentioned standards, so they are listed here along with the rules agreed for them. The following rules apply solely to these product groups, unless a view has no added value for consumers. The omission of views should always be agreed with the retailer.

**Products on a roll, such as carpet and wallpaper**
These products must be partially unrolled on the 'oblique' images (photographed at an angle) so that the print is visible.

**Products that are attached to something when in use, such as a garage door or a toilet roll holder**
Photograph these free-standing.

**Apparel**
Photograph this not stuffed, straight-on front and straight-on back.

**Longer products**
These are permitted to overshoot the image on the left. Again, the top angle must be 10-15º and the angle at which the product overshoots the image must be 30º.

**Measures of capacity**
If a product has more than one measure of capacity (e.g. paint), take a unique photo of each size.

**Colour**
Take a unique photo of every colour variant of the product (e.g. paint).

**Promotional packaging**
If a product has a promotional packaging as well as a regular packaging, unique photos should be taken of both.

**Volume products**
Take a photo of the standard consumer unit plus one loose product (e.g. tiles). Say they are always sold in sets of four, take a photo of a stack of four tiles plus a close-up of a loose tile.

**Light fittings**
Take a photo with the light on, unless an image with the light off provides more information.

**Handles (e.g. on a paint can)**
Place handles to the back and do not crop them out.

**Pumps/nozzles**
Place these to the left.

## 2.7 Special product images

### 2.7.1 360° product image

A 360° product image should be produced by rotating the product around a single axis with the camera taking shots at intervals of a defined number of degrees. All shots should be taken from the same angle to obtain a 360º image. The direction of rotation should be clockwise.

The minimum number of images is 24, the maximum 360. The sequence number should be included in the file name.

### 2.7.2 Detail image

A detail image is a photograph, line drawing or other graphical representation of a product attribute. It is used to emphasise a particular detail or attribute of an item. Detail images also include photos of a small part of a consumer unit in the case of products that are too large to be shown in their entirety (timber or plastic panels or pipes).

**Note:** a clipping path is required.

### 2.7.3 Montage image

A montage is a set of images placed over one another in layers to produce a complete image. Examples are a screwdriver with a close-up of the handle, or a box of nails with one or more nails out of the package in the foreground. In other words, these are composite images.

**Note:**

- The resolution of the smallest image in the composition must be 300 dpi.
- All images must have an active clipping path.

### 2.7.4 Hero Images

The international standard for Hero Images was issued in August 2018. This is separate from the standard for product images for the food, health and beauty and the DIY, garden and pets industries.
Hero Images (short for Mobile Ready Hero Images (MRHI)) are product images that have been adapted for websites and smaller smartphone screens. Research by Cambridge University has found that the following product attributes need to be shown more prominently on smaller screens: brand, type of product, variant and

size (weight, content or quantity). This can be achieved by editing the original product image, e.g. enlarging the brand name and removing superfluous text.
For detailed information see *https://www.gs1.org/standards/Mobile-Ready-Hero-Image/1-0*.

Mobile Ready Hero Images have specifications, that are different from the product images specifications above. These are:

| | |
|---|---|
| Image size: | 600 x 600 (minimum) |
| File resolution: | 90 ppi |
| File format: | JPG of PNG |
| Colour space: | sRGB |
| Background: | Different from the foreground in a sufficient way |
| Aspect ratio: | 1:1 (square ratio) |
| Margin: | As less white space as possible |
| Clipping path: | No |

**Note:** although the original packaging is modified, a Hero Image must be such that consumers can still recognise the product.

# 3 File name specifications

A large part of the standard for images relates to the agreed file naming rules, which indicate such things as what view of the product should be shown on the image.

The two file naming methods for images are GTIN based and GDTI (Global Document Type Identifier) based.

- GTIN based file naming should be used when the image contains a single item, which can be identified with a GTIN.
- GDTI based file naming should be used for items not identified with a GTIN (e.g. RCN identified items in apparel, images containing multiple different GTINs/products) and where a single image can be used for multiple products/items.

The specifications for product image file naming are set out below, here confined to GTIN based file naming.

## 3.1 GTIN based file naming

The full file naming specifications based on the 14-digit GTIN are set out below. To begin with we are using a limited data set.

The name is constructed as follows:

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| 1-14 | GTIN | GS1 trade item number | |
| 15 | _ | Underscore | |
| 16 | A | Product images (900 to 2,400 pixels per side) | File nature/type (simple designation, alphanumeric).<br>This section is dynamic (subject to frequent updates). |
| | B | Product image with supporting elements | |
| | C | Product image (high resolution)<br>(2,401 to 4,800 pixels per side) | |
| | D | Product image with supporting elements (high resolution) | |
| | E | 360° product image | |
| | F | Detail image | |
| | H | Mobile Ready Hero Image | |
| | L | Product packaging/Label information | |
| | M | Montage image | |
| 17<br>Only one value is permitted. | 0 | Nat applicable | Only for file type A,B,C,D |
| | 1 | Front face | Only for file type A,B,C,D,H |
| | 2 | Left | Only for file type A,B,C,D |
| | 3 | Top | Only for file type A,B,C,D |
| | 7 | Back | Only for file type A,B,C,D |
| | 8 | Right | Only for file type A,B,C,D |

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| | 9 | Bottom | Only for file type A,B,C,D |
| | _ | (Underscore) | Only for file type F,M |
| | 1 | Complete label | Only for file type L |
| | 2 | Nutritional table | Only for file type L |
| | 3 | Barcode | Only for file type L |
| | 4 | Ingredients | Only for file type L |
| | 5 | Nutrients/Ingredients combined | Only for file type L |
| | 6 | QR code | Only for file type L |
| | 7 | Certification Seals / Claims | Only for file type L |
| | 8 | Preparation instructions | Only for file type L |
| 18 | C | From above | Plunge angle: angle reference relative to the face being represented. |
| | L | Left view | |
| | R | Right view | |
| | N | No plunge angle | |
| 19 | 1 | In packaging | |
| | 0 | Out of packaging | The product as it first arrives 'out of packaging', not how it appears after it has been processed or prepared. |
| | A | Case | A shot of the product in its case as it would appear to the operator upon delivery. |
| | B | Inner pack | A shot of the product as it would appear inside its packaging inside the case. |
| | C | Raw/uncooked | A shot of a product that has not been cooked or processed or that needs to be cooked or further prepared before it is considered edible. |
| | D | Prepared | A shot of a product that has been taken from a raw or uncooked state to a cooked state according to the appropriate method of preparation (e.g. baked, fried, grilled or boiled). |
| | E | Plated | Prepared food arranged simply on a serving plate, dish or bowl for better visibility. May include an additional step, such as garnishing or other enhancement. |
| | F | Styled | Carefully and artfully arranged for an attractive visual presentation, and designed to suggest the taste, aroma and appeal of the actual dish. May include complementary items (e.g., an entrée and side sides) to present the impression of a complete meal. May also include an additional step, such as garnishing or other enhancement. May be presented with different backgrounds and at different angles. |

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| | G | Staged | A shot of a product that has been arranged for display in such a way as to provide clear visibility. The product may be propped up if necessary, for optimum viewing, but it should not be held or used in any way by a person. |
| | H | Held | A shot of a product that has been held out for display by one hand or a pair of hands. When relevant, proper grip should be demonstrated. Apart from the hands and forearms, no part of the person holding the item should be visible. |
| | J | Worn | A shot of a product, such as a protective article of clothing, which is worn by a person. The complete product should be visible inside the frame, but the individual wearing it should be cropped out as much as possible. |
| | K | Used | A shot of a product as it is meant to be used in its appropriate environment. Small utensils may be held in a hand or hands and used for their intended purpose. |
| | L | Family package | A shot of several related products (e.g., matched sets) arranged together in a single picture. |
| | M | Open case | A shot of a case, flaps open, that shows how the product would look when an operator receives the product and opens the case. |
| | N | Size comparison | An image comprised of the product image and dimensional values (with or without accompanying illustration) to give a consumer a perspective as to the size/scale of the item. |

Table 3.1: name construction

The following values are optional additions to be used if the product being imaged requires them, in the order in which they should appear.

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| 20 | _ | Underscore | |
| 21+ | (aa) or (aa-AA) | Language Indicator (ISO-639, 2 character alphanumeric) | Example of French version:(GTIN)_A1L1_**fr**<br><br>Example syntax for populating a country variation of a Language Indicator attribute: aa or optionally aa-BB where aa = ISO 639 code list, must be lower case where BB = ISO 3166-1 Country Code, 2 Alpha character representation, must be upper case to be used only if multiple faces of dissimilar languages occur. |
| | MMYY | Image end date/promotional (4 character numeric) | MMYY that the image is valid until (i.e. if good until 1217 (Dec 2017) then to be removed after 1 January 2018). |

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| | sNN | Sequence Number (3 character alphanumeric) | Lowercase 's' followed by numeric digits for sequence number will be added at the end of file name with the following format: underscore, lowercase 's' and then two mandatory numeric digits. |
| | R | Rendered image | The result of the creation of a digital likeness of a physical object with the use of a computer and software. |
| | CPV (an..20) | Consumer Product Variant number as identified in GDSN | |

Table 3.2: optional additions

**Example: 08700000000001_C1C1_1219_s01.tiff**

| | | |
|---|---|---|
| GTIN | 8700000000001 | 08700000000001 |
| Image type | Product image | C |
| Facing | Front face | 1 |
| Angle | Centre | C |
| State | In package | 1 |
| Image End Date | End date (December 2019) | 1219 |
| Sequence Number | Sequence number (1) | s01 |

Table 3.3: example

## 3.2 File naming of montage and detail images

The file name construction is different for both montage and detail images.
The name is constructed as follows:

| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| 1-14 | GTIN | GS1 trade item number | Use the GTIN to which the image is linked. |
| 15 | _ | Underscore | |
| 16 | M<br>F | Montage image<br>Detail image | See the definitions above. |
| 17 | _ | Underscore | |
| 18-20 | 001 | Unique sequence number | |

Table 3.4: file naming of montage and detail images

## 3.3 File naming of 360° product images

The file name construction is also different for 360° product images.
The name is constructed as follows:

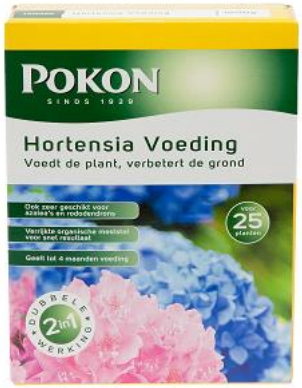
| Position in the file name | Value | Description | Explanation |
|---|---|---|---|
| 1-14 | GTIN | GS1 trade item number | Use the GTIN to which the image is linked. |
| 15 | _ | Underscore | |
| 16 | E | 360° product image | |
| 17 | (N1) | Facing indication | |
| 18 | _ | Underscore | |
| 19-20 | (N2) | Angle | For 3D images a front view taken at a 15º angle top from centre is preferred. |
| 21 | _ | Underscore | |
| 22-24 | (N3) | Angle position | The image numbering should be relative to the degree of rotation. This value will be derived from the first image as 0º and continue in a clockwise fashion. The maximum value is 360 if a shot is taken for each degree. |
| 25 | _ | Underscore | |
| 26-28 | sNN | Unique sequence number | Lowercase 's' followed by numeric digits for sequence number will be added at the end of file name with the following format: underscore, lowercase 's' and then two mandatory numeric digits. |

Table 3.5: file naming of 360° product images

## 3.4 Examples

**Note:** (GTIN) in the examples represents the product's GTIN (14 characters).


(GTIN)_C1L1
Product image/Front face/
Left/In packaging




(GTIN)_C1C1
Product image/Front face/
Front/In packaging


(GTIN)_C1R1
Product image/Front face/
Right/In packaging

Figure 3.1: construction of file name for product in packaging (where it cannot be photographed out of packaging)


(GTIN)_C1N1
Product image/Front face/
No plunge angle/In packaging


(GTIN)_C2N1
Product image/Left side/
No plunge angle/In packaging


(GTIN)_C3N1
Product image/Top/
No plunge angle/In packaging

Figure 3.2: file name construction for product in packaging (this item is not photographable out of its packaging; therefore, shelf management photos also show it in its packaging)

The filename (GTIN)_C1N1 always applies for food, health and beauty, apart from the exceptions listed in 2.7.


(GTIN)_C1C1


(GTIN)_C7C1

Figure 3.3: product with more than one marketing face (the highest vertical face is shown as '1')

In both industries in the case of products with multiple front faces the left image of the product has the file name (GTIN)_C1C1, based on the 'Portrait before landscape' rule in the international measurement rules. The right file naming (GTIN)_C7C1 is used for the additional (landscape) front face.


(GTIN)_C1L1_nl


(GTIN)_C1L1_fr

Figure 3.4: same product in dissimilar languages



(GTIN)_C1L1 (GTIN)_C1L1_0109

Figure 3.5: promotional end date for time-specific packaging


(GTIN)_D1CK (GTIN)_D1N1

Figure 3.6: product image with supporting elements


(GTIN)_M_002 (GTIN)_M_123

Figure 3.7: montage image

(GTIN)_F_001 (GTIN)_M_002

Figure 3.8: detail image


(GTIN)_H1N1_en


(GTIN)_H1N1

Figure 3.9: mobile Ready Hero Image

# 4 Appendix

## A.1 Glossary

| Name | Definition |
|---|---|
| Alpha channels | An alpha channel is part of an image enabling it to be reproduced partially translucent. The process involved is known as 'alpha blending': the image is combined with a background so that it appears to be transparent. |
| Clipping path/clipping mask | A clipping path or clipping mask is a selection and cut-out of part of the original complete image. Creating a clipping path involves taking a photo of the project free-standing, then separating (cutting) the product from the background to give it a transparent background. |
| Compression artefacts | Compression artefacts are caused by non-lossless compression. Highly compressed JPEG photos have sharp transitions, e.g. a blotchy or frayed appearance in the case of text. The JPEG compression mechanism often causes these artefacts to occur in 8 x 8-pixel patterns. |
| DPI | DPI is the unit of resolution, expressed in pixels per linear inch. The standard for colour images in printed matter is 300 dpi, so we require 300 dpi for our omnichannel channels. Right-click the photo and select Properties to see how many dpi it is.<br><br>In Adobe Photoshop go to Image > Image size and enter 300 dpi under Resolution. Check that the width and height change automatically at the same time, otherwise the quality of the image will suffer. |
| Adobe RGBA colour space | The colour of a pixel is defined as the sum of its blue, red and green values. By 'blending' these colours virtually any colour can be created. The A stands for Alpha, which represents the degree of transparency (1 is 0º transparency, 0.5 is half-transparent, and so on). Standards are needed to ensure that different devices such as a camera, computer, monitor and printer reproduce colours the same way. Adobe RGBA is a colour space developed by Adobe Systems Inc. which is in general use as a standard. |
| LZW compressed | LZW stands for Lempel-Ziv-Welch, the names of the three creators of this data compression technology. It reduces the size of the image without loss of data. Thus, all the data is included in the file and quality is preserved. Smaller files can be downloaded faster and require less disk space. LZW is one of the most popular compression algorithms and is used in many programs and image formats. |
| Moiré patterns | Moiré is a kind of digital artefact that occurs when two patterns intersect, forming a new pattern. As the new pattern is always coarser than the two original ones, the shape changes depending on the screen frequency and angle. The finer the two original patterns, the easier the moiré is to see. |
| Transfer functions | Transfer functions are generally used to compensate for the point widening or narrowing that occurs when an image is transferred to film. Point widening is when the ink dots comprising a printed image are larger than in the halftone raster (e.g. as a result of spreading out on the paper). Point narrowing is when the dots are printed smaller. In this option the transfer functions are applied to the file when this is done. |

| Name | Definition |
|---|---|
| Photoshop layers | Photoshop layers can be compared with sheets of transparent paper on top of one another. The underlying layers can be seen through the transparent parts of an upper layer. A layer can be moved to change the position of its content, just as a sheet of transparent paper in a stack can be moved to a different position. The coverage of a layer can also be changed to make the content partially transparent. |
| PostScript colour management | This converts file data to the printer's colour space. This option cannot be used if the image must be included in another document with colour management. |
| TIFF file | TIFF is the best-quality file format for digital images, specifically designed for unedited/original files. It can be compressed, thus reducing the file size.<br><br>TIFF format does not involve any loss of quality and can be opened by many programs. It can be selected in most programs under 'Save As'. EPS files are used for vectors; JPG files involve loss of quality. |

Table 4.1: glossary