



Guidelines and Quality Assurance rules for Product Images

Validoo
Version H
2019-06-03

Content

1	Introduction.....	4
2	Purpose of document	4
3	Scope	4
4	Views for product images per Field of Application	5
	4.1 Product image for Sales & Marketing	5
	4.2 Mandatory image for Planogram	5
	4.3 Optional images for Planogram.....	6
5	Image identification	7
6	Field of Application Sales & Marketing.....	8
	6.1 Quality Assurance rules product images Sales & Marketing	8
	6.1.1 Image Technical Requirements	8
	6.1.2 Image quality requirements	8
	6.2 Quality Assurance of product images Sales & Marketing	10
	6.2.1 Automatic validation.....	10
	6.2.2 Manual Quality Assurance.....	11
	6.2.2.1 Image object corresponds with Trade Item Information	11
	6.2.2.2 Image Meta Data reviewing	12
	6.2.2.3 Image review according to quality assurance rules.....	13
	6.2.2.4 Image review of MRHI-images (Mobile Ready Hero Image).....	14
7	Field of Application Planogram	15
	7.1 Quality Assurance rules for product images Planogram.....	15
	7.1.1 Image Technical Requirements	15
	7.1.2 Image Quality Requirements	16
	7.2 Quality Assurance of product images Planogram	16
	7.2.1 Automatic validation.....	16
	7.2.2 Manual Quality Assurance.....	17
	7.2.2.1 Image object corresponds with Trade Item Information	17
	7.2.2.2 Image review according to quality assurance rules.....	18
	Appendix File name standard at download	19

Change history

Version	Change	Prepared by	Date
A	First version	Gustavsson	22/11-11
B	Second version. Added rules for planogram.	Gustavsson	28/8-13
C	Third version. Updated planogram rules. Clarifying text adjustments.	Gustavsson	25/11-13
D	4th version. Changed rules WRN to NOK. Clarifying text adjustments in rule descriptions	Gustavsson	22/4-14
E	5 th version. Updates according GS1 Product Image Specification vers. 2.5, Mar-2014. Changes rule 737001. Images added and clarifications for identification of images (new file/nature type and new angle) and file naming.	Gustavsson	30/10-14
F	6 th version. Update according GS1 Europe guidelines. Changes rule 737024. The image should be cropped max 2,5% from image object edge to image cropping (image sides).	Ralfsson	19/12-16
G	7 th version. Clarification regarding rule 737006. Functional name comparison with image	Danofsky	24/9-18
H	8 th version. Added requirements for MRHI- Images	Danofsky	3/6-19

1 Introduction

Validoo publishes, stores and distributes quality assured product images. The quality assurance is made in two steps. First step is an auto validation from a set of parameters, for example file format and image size. Next step is manual checking of the image making sure it fulfills specified quality requirements. The system also compares the image against quality assured trade item information in Validoo.

2 Purpose of document

Validoo's rules and guidelines for product images have been developed and supported by Validoo's user groups and are based on GS1 global standard for product images (GS1 Product Image Specification 3.3).

https://www.gs1.org/sites/default/files/docs/gdsn/Product_Image_Specification.pdf

The purpose of this document is to describe the guidelines and requirements for product images in Validoo, what is included in the image review and how it works.

3 Scope

The document does not specify the images end-use format, the idea is that the product images in Validoo is of high enough quality that they can be used as an image source to the end user's own specific applications.

In need of product images of large size or other requirement that does not comply with the rules below, it is up to the provider and recipient to agree on the handling of images outside the provided service.

4 Views for product images per Field of Application

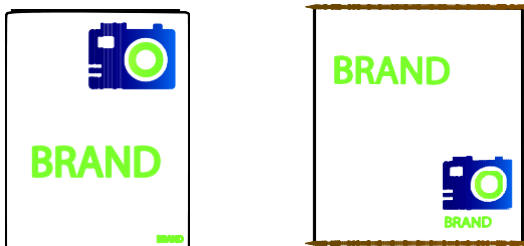
A product image can be photographed from several different views depending on package type and field of application. When product images are uploaded to Validoo some views are mandatory and others recommended.

4.1 Product image for Sales & Marketing

Recommended view is an image with perspective in packaging. Angle depends on package type (see examples below). In addition to those recommended images you can have more images of the product both in and out of its packaging.

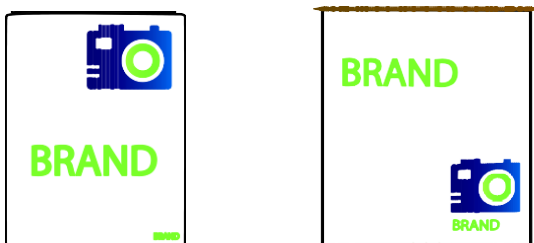


If no perspective image is available for package type it is mandatory with an image taken straight-on front (see below).



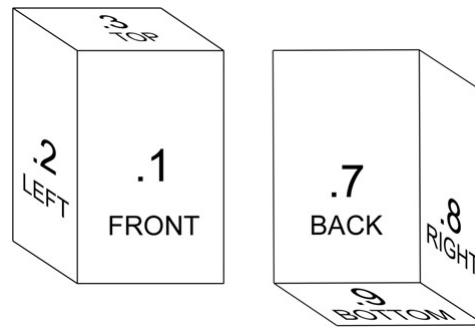
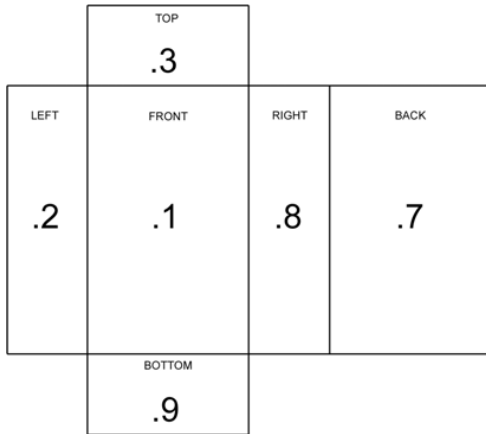
4.2 Mandatory image for Planogram

A straight-on front image, no plunge (see below).



4.3 Optional images for Planogram

- One image “branded” side. Image is taken straight-on from one side (side marked .2 eller .8 in below figures).
- One image from top. Image is taken straight-on top (side marked .3 in figures below)



5 Image identification

The rules for the file name are to identify images of products (GTIN) and to distinguish the views of each image through image metadata and/or filename at download. Read more about file/nature type with supporting elements on Validoo.se.

For images for Sales & Marketing the file name is constructed according to:

Image metadata:	Content, filename:	Position in file name:	Explanation:
GS1's article number	GTIN	1-14	
underscore	_	15	
Still shot single GTIN	C	16	File Nature/type
Still shot single GTIN with supporting elements	D		
Front	1	17	Facing indicator
Left	2		
Top	3		
Back	7		
Right	8		
Bottom	9		
Center	C	18	Angle identifier
Left	L		
Right	R		
No Plunge	N		
In packaging	1	19	In/Out of packaging
Out of packaging	0		



GTIN_C1L1



GTIN_C1N1



GTIN_C1R1



GTIN_C1C1

6 Field of Application Sales & Marketing

In the production of product images for Sales & Marketing shadows and reflections should be realistic and neutral. White background (RGB 255/255/255) is recommended.

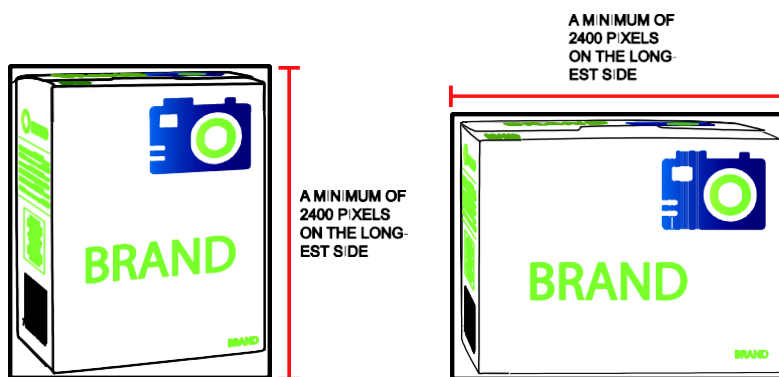
6.1 Quality Assurance rules product images Sales & Marketing

In the production of product images for Validoo these rules must be followed to allow publication of the images used for Sales & Marketing.

6.1.1 Image Technical Requirements

The images must meet the following technical requirements to be published in Validoo.

- File format: LZW Compressed TIFF or JPEG
- Resolution: 300 ppi
- Image size: one side of the image must be at least 2400 pixels
- Color mode RGB (for example Adobe RGB 1998)
- File size: max 10 Mb
- All images must contain one active Clipping Path, properly created and named "Path 1"
- No alpha channels or layers
- No guides
- The storage of the source file should be RGB 8 bit per channel



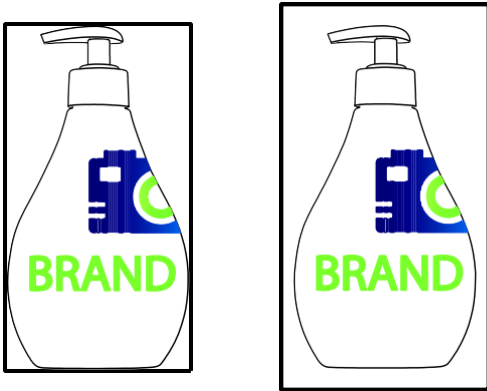
6.1.2 Image quality requirements

The images must meet the following quality requirements to be published in Validoo.

- No visible best-before-dates
- No signatures, finger prints or visible water stamps
- No compression artefacts. No interpolation artefacts.
- No scanned images from printed pages
- The image object has to be in good condition, for example no evidence of dust or scratches
- Moiré patterns should be minimized
- Color and contrast should be realistic and balanced over-all. No color casts.
- Retouching should be as undetectable as possible and be convincing at 200% magnification.

- The image should be cropped close to the object. Max 2,5% from image object edge to image cropping (image sides).*
- The image should be professionally produced.
- The image should not be over sharpened in the (digital) image processing.
- The lighting of product should be professionally and soft produced.

* Recommendation: cropping exactly to the image object's edge. Exceptions to the rule when image has a shadow or reflection. The image must be cropped exactly at the shadow or reflection or maximum of 2,5% from image object edges including the shadow / reflection. The size of image object (without shadow or reflection) must be minimum 1800 pixels.



Examples cropping: the left image is cropped exactly to the edges of the product and the second image is cropped with 2,5% white surface from the product's outer edges.



Examples cropping: the left image is cropped exactly to the edges of the product (reflection included) and the second image is cropped with 2,5% white surface from the product's (reflection included) outer edges.

6.2 Quality Assurance of product images Sales & Marketing

The image checking implies a check of the product image in compliance with the rules (see section above) by both an automatic validation and a manual quality assurance.

6.2.1 Automatic validation

An automatic validation checking file name, file format, image size, resolution and file size is done at upload.

Rule	Rule description (what)	Validation (how)	Result
737000	Accepted file formats are LZW compressed TIFF and JPEG	For the field metadata (Image Properties) file must be TIFF or JPEG	OK/NOK
737001	Image resolution must be 300 ppi.	For the field metadata (Image Properties) the resolution must be 300 pixels per inch.	OK/NOK
737002	One of the image sides must be at least 2400 pixels.	One of the fields for metadata (Image Properties) height and width must be at least 2400 pixels.	OK/NOK
737003	Color mode should be RGB. (The ICC profile can as an example be Adobe RGB)	For the field metadata (Image Properties) the color mode must include RGB (for example Adobe RGB)	OK/NOK
737004	The image file size must not be more than 40 MB.	The real size of the image must not be more than 40 Mb (Mega Bytes)	OK/NOK

If the image does not meet all the requirements, the user will directly in the web interface get a response that the image is not approved. The user can correct the image and then upload a new image. If the image meets all the requirements that are validated in the automatic validation the image will be transferred to the manual quality assurance (see next section).

6.2.2 Manual Quality Assurance

If the image has been approved in the automatic validation the image will be transferred to a manual image checking.

6.2.2.1 Image object corresponds with Trade Item Information

This step in the quality assurance means that Validoo manually verifies if the GTIN, item name, brand and package size of the image object corresponds with trade item information.

Rule	Rule description (what)	Image check (how)	Result	Warning text	NOK text
737005	GTIN on the product must correspond with the Trade Item Information (T0154)	Manual check of image correspondence with trade item information	OK/NOK/WRN	Checking is not possible due to not visible or readable information on the image.	GTIN on the product does not correspond with the trade item information (T0154)
737006	Functional Name in Trade Item Information (T0018) must correspond with the Item in the image.	Manual check of image correspondence with trade item information	OK/NOK/WRN	Checking is not possible due to not visible, unidentifiable or readable information on the image.	Functional name in Trade Item Information (T0018) does not correspond with Item in image.
737007	Brand name of product in image must correspond with Trade Item Information (T0143)	Manual check of image correspondence with trade item information	OK/NOK/WRN	Checking is not possible due to not visible or readable information on the image.	Brand on the product does not correspond with the trade item information (T0143)
737008	Article size, text of product in image must correspond with Trade Item Information (T3338)	Manual check of image correspondence with trade item information	OK/NOK/WRN	Checking is not possible due to not visible or readable information on the image.	Article size on the product does not correspond with the trade item information (T3338)

If any of the attributes does not correspond with the trade item information a new image must be uploaded.

The result "Warning" for the rules above means that if there is no visible information the degree of certainty that the image is correct will decrease, but the final result will still be OK.

6.2.2.2 Image Meta Data reviewing

Users fill in meta data about the image during the upload process. Validoo will perform a manual review checking that filled in attributes corresponds with the rules. If the meta data is not correct Validoo will correct the meta data and the result will be Warning (WRN). The overall result of this step in the image review will be OK.

Rule	Rule description (what)	Image checking (how)	Result	Warning text
737009	Construction of file name, 16th position, definition of file type: Still shot single GTIN (C) Still shot single GTIN with supporting elements (D) Still shot single GTIN, graphic rendering (G)	Manual check that the filled in meta data correspond with the image. Editing by Validoo if not correctly filled in.	OK/WRN	File type has been edited according to quality assurance rules
737010	Construction of file name, 17th sign, definition of facing: Front (1) Left (2) Top (3) Back (7) Right (8) Bottom (9)	Manual check that the filled in meta data correspond with the image. Editing by Validoo if not correctly filled in.	OK/WRN	Facing has been edited according to quality assurance rules
737011	Construction of file name, 18th sign, definition of angle: Center (C) Left (L) Right (R) No Plunge (N)	Manual check that the filled in meta data correspond with the image. Editing by Validoo if not correctly filled in.	OK/WRN	Angle has been edited according to quality assurance rules
737012	Construction of file name, 19th sign, definition of with or without consumer package: In packaging (1) Out of packaging (0)	Manual check that the filled in meta data correspond with the image. Editing by Validoo if not correctly filled in.	OK/WRN	With or without package has been edited according to quality assurance rules

6.2.2.3 Image review according to quality assurance rules

The last step in the quality assurance means a check of the image quality based on the rules (see earlier section).

Rule	Rule description (what)	Image check (how)	Result	NOK text
737013	All images must contain an activated and correctly designed clipping path named "Path 1"	Manual check	OK/NOK	Clipping path is missing or is incorrect.
737014	No signatures, finger prints or visible water stamps	Manual check	OK/NOK	There are visible signatures, finger prints or water stamps
737015	No compression artefacts. No interpolation artefacts ("resizing up").	Manual check	OK/NOK	Image with compression artefacts or interpolation artefacts
737016	No scanned images from printed pages	Manual check	OK/NOK	The image is scanned from a print out.
737017	The image object has to be in good condition, for example no evidence of dust or scratches	Manual check	OK/NOK	Evidence of dust or scratches in image
737018	Moiré patterns should be minimized.	Manual check	OK/NOK	Moiré pattern is to prominent
737019	No visible best before date	Manual check	OK/NOK	Best before date is visible in the image.
737020	No alpha channels or layers	Manual check	OK/NOK	Image has alpha channels or layers
737021	No guides	Manual check	OK/NOK	Image has guides
737022	Color and contrast should be realistic and balanced over-all. No color casts.	Manual check	OK/NOK	Color and contrast is not realistic and balanced over-all or image has color casts.
737023	Retouching should be as undetectable as possible and be convincing at 200% magnification.	Manual check	OK/NOK	Retouching is not convincing at 200% magnification.
737024	The image should be cropped close to the object. Max 2,5% from image object edge to image cropping (image sides).	Manual check	OK/NOK	The image is not cropped close to the object.
737025	The image should be professionally produced.	Manual check	OK/NOK	Object in image is not professionally produced.
737026	The Image should not be over sharpened in the (digital) image processing.	Manual check	OK/NOK	The image is over sharpened.
737027	The image of the product should have a professional and soft lightning.	Manual check	OK/NOK	The lightning of product is uneven
737028	The storage of the source file should be RGB 8 bit per channel	Manual check	OK/NOK	The storage of the image file is not 8 bit by channel.

6.2.2.4 *Image review of MRHI-images (Mobile Ready Hero Image)*

MRHI-images is marketing images adapted to small screens. These images are modified to enhance certain attributes on the image which make it easier for the consumer in their purchase process. Examples of attributes that can be enhanced are; Size, Product Type, Brand or Variant. The images should follow the guidelines produced by GS1 Sweden that can be found here:

<https://validoo.se/en/faq/guidelines-for-mobile-ready-hero-images/>

Rule	Rule description (what)	Image check (how)	Result	NOK text
737041	Symbols, logotypes and information (text) must not appear off pack. Enhanced symbols must not be present.	Manual check	OK/NOK	The Image does not meet the requirements for MRHI.



7 Field of Application Planogram

The images for planograms are primarily intended to be used as the source for store shelves that are created in software for Space Management.

7.1 Quality Assurance rules for product images Planogram

In the production of product images for Validoo these rules must be followed to allow publication of the images for the field of application Planogram.

7.1.1 Image Technical Requirements

The images must meet the following technical requirements to be published in Validoo.

- File format: PNG
- One of the image sides must be at least 300 pixels and maximum size of all sides is 500 pixels (see image below)
- Color mode RGB (for example Adobe RGB 1998)
- File size: max 2 Mb
- **If** the image contains an activated clipping path it must be named "Path 1"
- No alpha channels or layers.



7.1.2 Image Quality Requirements

The images must meet the following quality requirements to be published in Validoo.

- The image must have a transparent background.
- The image must be straight on front, straight on top or straight on one of the sides. (No Plunge)
- The image should be cropped to image object edge. (see image below)



Example cropping exactly the image object's outer edges. Transparent background (when viewing the image editing software Photoshop).

7.2 Quality Assurance of product images Planogram

The image checking will involve a check of the product image in compliance with the rules (see section above) by both an automatic validation and a manual quality assurance.

7.2.1 Automatic validation

An automatic validation checking file name, file format, image size and file size is done at upload.

Rule	Rule description (what)	Validation (how)	Result
737030	Accepted file format is PNG	For the field metadata (Image Properties) the file format must be PNG	OK/NOK
737031	One of the image sides must be at least 300 pixels.	One of the fields for metadata (Image Properties) height and width must be at least 300 pixels.	OK/NOK
737003	Color mode should be RGB. (The ICC-profile as an example be Adobe RGB)	For the field metadata (Image Properties) Color mode must include RGB (as an example Adobe RGB)	OK/NOK
737032	Image file size should be maximum 2 MB.	Image real size must not be more than 2 Mb (Mega Bytes)	OK/NOK
737036	Maximum size of all sides of image is 500 pixels	No field for metadata, height or width can exceed 500 pixels.	OK/NOK

If the image does not meet all the requirements, the user will directly in the web interface get a response that the image is not approved. User can then correct image and then upload a new image. If the image meets all the requirements that are validated in the automatic validation the image will be transferred to the manual quality assurance (see next section).

7.2.2 Manual Quality Assurance

7.2.2.1 *Image object corresponds with Trade Item Information*

This step in the quality assurance means that Validoo manually verifies if the GTIN, item name, brand and package size of the image object corresponds with trade item information.

Rule	Rule description (what)	Image check (how)	Result	Warning text	NOK text
737005	GTIN on the product must correspond with the Trade Item Information (T0154)	Manual check of image correspondence with trade item information	OK/NOK /WRN	Checking is not possible due to not visible or readable information on the image.	GTIN on the product does not correspond with the trade item information (T0154)
737006	Item name of product in image must correspond with Trade Item Information (T0018)	Manual check of image correspondence with trade item information	OK/NOK /WRN	Checking is not possible due to not visible or readable information on the image.	Name on the product does not correspond with the trade item information (T0018)
737007	Brand name of product in image must correspond with Trade Item Information (T0143)	Manual check of image correspondence with trade item information	OK/NOK /WRN	Checking is not possible due to not visible or readable information on the image.	Brand on the product does not correspond with the trade item information (T0143)
737008	Article size, text of product in image must correspond with Trade Item Information (T3338)	Manual check of image correspondence with trade item information	OK/NOK /WRN	Checking is not possible due to not visible or readable information on the image.	Article size on the product does not correspond with the trade item information (T3338)

If any of the attributes does not correspond with the trade item information a new image must be uploaded.

The result "Warning" for the rules above means that if there is no visible information the degree of certainty that the image is correct will decrease, but the final result will still be OK.

7.2.2.2 Image review according to quality assurance rules

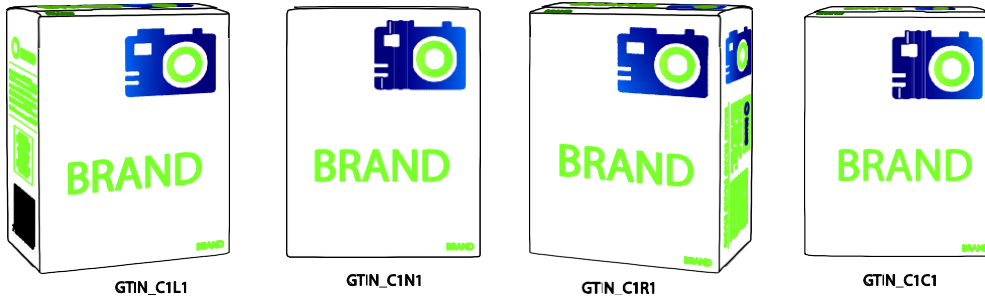
The last step in the quality assurance means a check of the image quality based on the rules (see earlier section).

Rule	Rule description (what)	Image check (how)	Result	NOK text
737033	If the image contains an activated clipping path it must be named "Path 1".	Manual check	OK/NOK	Clipping path is not named "Path 1".
737020	No alpha channels or layers.	Manual check	OK/NOK	Image has alpha channels or layers.
737037	The image must be cropped exactly to the edge of image object.	Manual check	OK/NOK	The image is not cropped exactly to the edge of the image object.
737034	The image must have a transparent background.	Manual check	OK/NOK	The background on the image is not transparent.
737035	The image must be straight on front, straight on top or straight on left/right side. (No plunge)	Manual check	OK/NOK	The image is not straight on (it has an angle /perspective).

Appendix File name standard at download

The first 14 digits are the item's GTIN. The remaining characters are for identification of image based on different views. See chapter 3 in the section above for a description of the views.

For images ("Still shot single GTIN") for Sales & Marketing the standard filename at download is constructed as following examples:



For images intended for Planogram the file name is constructed according to:

Position in file name:	Content:	Explanation:
1-14	GTIN	GS1's article number
15-16	.1 .2 .3 .7 .8 .9	Straight on, front shot Straight on, left view Straight on, top view Straight on, back shot Straight on, right view Straight on, bottom view

