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Barcode Guidelines

A well-designed barcode should do more than fit your packaging. It should remain clear, readable, and easy to scan throughout the product's journey. These guidelines cover the essentials of preparing retail barcodes for flexible packaging.

01
Choose The Right Barcode

EAN-13 and **UPC-A** are commonly used for retail products.
Confirm the appropriate format and product identification number (GTIN) with your GS1 organization or retail partner.
Use a valid, print-ready barcode file and ensure the numbers below the symbol match the encoded data.

02
Dimensions & Quiet Zones

Maintain barcode dimensions in accordance with applicable GS1 standards.
Avoid stretching, compressing, or reducing bar height.
Keep quiet zones on both sides free from text, graphics, and other printed elements.

EAN-13 at 100% size:

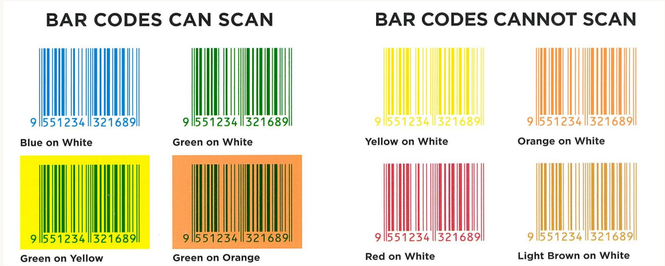
- Total width: 37.29 mm (including quiet zones)
- Minimum bar height: 22.85 mm
- Left quiet zone: 3.63 mm
- Right quiet zone: 2.31 mm)

03
Artwork Quality

Supply barcodes as vector artwork whenever possible to preserve sharp, accurate edges.
Avoid low-resolution images, manual redrawing, or modifications that may distort bar widths.
Ensure the human-readable numbers match the encoded data.

04
Color & Contrast

High contrast is essential for reliable scanning.
Recommended: Black bars on a solid white background.
Avoid: Red or reddish bars, low-contrast combinations, patterned backgrounds, and reflective surfaces that may interfere with scanning.
Other dark-on-light color combinations may be possible but should be verified before production.



05
Barcode Placement

For most retail packaging, the lower-right area of the back panel is a preferred location.
Choose a smooth, accessible surface and avoid placing barcodes across:

- Seals and zippers
- Gussets and folds
- Corners and package edges
- Creases or highly curved areas

Always consider the barcode's position on the **finished, filled package**, not just the flat artwork.

06
Material & Printing

Packaging materials and finishing techniques can affect barcode readability.
Transparent films and metallic surfaces may require an opaque, light-colored backing behind the barcode.
Ink spread, surface texture, and reflections can also affect print quality.
Confirm any necessary barcode adjustments with your printing team before production.

Final Artwork Checklist

- ☐ Correct barcode type and GTIN
- ☐ Print-ready barcode artwork
- ☐ Compliant size and quiet zones
- ☐ Sufficient color contrast
- ☐ Placement clear of seals, folds, and obstructions
- ☐ Barcode verification on a representative printed sample

Barcode requirements may vary by application, printing method, and retail market. Consult your GS1 organization or retail partner for specific compliance requirements.