

# SOP: Inventory Labeling and Barcoding Standards

This SOP defines **inventory labeling and barcoding standards** to ensure accurate identification, tracking, and management of inventory items. It covers labeling materials and formats, barcode symbologies, placement guidelines, scanning procedures, and quality control measures. Adhering to these standards improves inventory accuracy, streamlines stock management, reduces errors, and enhances overall operational efficiency within the supply chain and warehouse environments.

## 1. Purpose

To establish standardized requirements for labeling and barcoding all inventory items for effective tracking, accuracy, and management within warehouse and supply chain operations.

## 2. Scope

This SOP applies to all inventory items stored, received, shipped, or transferred at any facility in the organization that utilizes inventory management systems.

## 3. Responsibilities

- **Warehouse Staff:** Apply and verify labels and barcodes as per standards.
- **Inventory Control:** Ensure compliance with labeling guidelines and maintain records.
- **Supervisors/Managers:** Oversee implementation and address non-conformance.
- **IT/Systems Support:** Maintain barcode scanning and inventory software systems.

## 4. Labeling Materials and Formats

- Labels must be durable, smudge-proof, and resistant to typical warehouse conditions (e.g., moisture, abrasion, temperature changes).
- Use approved label printers and materials (e.g., polyester, polypropylene, or thermal-transfer paper as specified).
- Minimum label dimensions: 50mm x 25mm (2in x 1in), unless item size requires otherwise.

Label Component	Requirement
Text (Human Readable)	Item number, description, and lot/serial number (if applicable).
Barcode	Unique identifier matching the system entry.
Company Logo (optional)	May be included for branding and identification.

## 5. Barcode Symbologies and Standards

- Primary Symbology: **Code 128** (default for internal use).
- **EAN-13** or **UPC-A** for items distributed at retail (if required).
- **2D Barcodes (e.g., QR, DataMatrix):** Allowed for small labels or high data density, subject to system compatibility.
- Barcode size must ensure machine readability with a scanner at working distances (minimum height: 15mm; minimum X-dimension: 0.33mm for 1D barcodes).
- Use black bars/characters on white background for maximum contrast.

## 6. Label and Barcode Placement

1. Affix label to the item's largest flat surface or designated label area.
2. Ensure barcode is fully visible and not obstructed by packaging, straps, or bands.
3. If the item is too small, apply label to individual packaging or to an outer box/tray with clear mapping to contents.
4. Pallets or cases: apply label on at least two adjacent sides.

## 7. Scanning Procedures

- Use organization-approved barcode scanners for all stock movements and transactions.
- Visually inspect barcodes prior to scanning to ensure they are undamaged and legible.
- Rescan if the system does not confirm a successful read; replace label if scanning repeatedly fails.

## 8. Quality Control and Maintenance

- Perform routine spot checks on label/barcode legibility and data accuracy.
- Immediately replace damaged, faded, or missing labels.
- Keep records of label replacements and barcode quality failures.
- Periodically audit adherence to this SOP and revise procedures if necessary.

## 9. Records and Documentation

- Retain all records of assigned barcode numbers, label application dates, and audits for at least 3 years.
- Document any deviations or corrective actions taken regarding labeling and barcoding.

## 10. References

- GS1 General Specifications
- Internal Inventory Management Policies
- Manufacturer's Barcode Guidelines (where applicable)

**Note:** Adherence to these standards is mandatory. Any exceptions must be documented and approved by inventory control management.