
Receiving and Quarantine Protocol for Defective Raw Materials

1.0 Objective & Scope

The objective of this procedure is to ensure that all incoming raw materials suspected or confirmed as defective are immediately segregated from usable stock, properly documented, and processed for return or disposal. This prevents defective materials from entering production, maintains inventory accuracy, and supports supplier quality management.

This SOP applies to all Receivers, Inventory Clerks, and Quality Inspectors handling inbound raw material shipments. The Receiving Lead is responsible for ensuring compliance, and the Inventory Manager must be notified of any discrepancies exceeding 2% of the shipment value.

2.0 Required Systems, Tools & Materials

- SupplyGrid WMS (Warehouse Management System) – Receiving and Quarantine modules
- Mobile barcode scanner (Zebra TC21 or equivalent)
- Red 'Quarantine' tags (pre-printed with unique ID numbers)
- Clear plastic quarantine bins or pallet cages with lockable lids
- Digital camera or smartphone for photographic evidence
- Clipboard, pen, and Defective Material Report (DMR) forms
- PPE: Steel-toed boots, high-visibility vest, cut-resistant gloves, safety glasses

3.0 Safety & Handling Precautions

- High-visibility vest must be worn at all times in the receiving bay and quarantine area.
- Steel-toed boots are mandatory when handling pallets or heavy raw material containers.
- Cut-resistant gloves must be worn when opening shrink wrap or banding straps.
- Use proper ergonomic lifting techniques for boxes over 15 kg; use a pallet jack or forklift for heavier loads.
- Do not stack quarantine bins more than two high to prevent tipping.
- If defective material is hazardous (e.g., leaking chemicals), follow the facility's Hazardous Material Spill Response SOP immediately.

4.0 Step-by-Step Procedure

1. Upon arrival of the inbound shipment, verify the packing slip against the purchase order in SupplyGrid WMS. Note any discrepancies in quantity or part number.
2. Perform a visual inspection of all raw material containers for signs of damage, moisture, contamination, or tampering. Use a flashlight if necessary.
3. If any material appears defective (e.g., crushed boxes, rust, discoloration, foreign objects), immediately place the affected units aside on a designated inspection table.

4. Scan the barcode of each defective unit using the mobile scanner. If no barcode exists, manually enter the part number and lot number into the WMS.
5. In the SupplyGrid WMS, navigate to the 'Quarantine' module and create a new quarantine record. Select the reason code 'Defective Raw Material' and attach any relevant notes (e.g., 'crushed corner', 'water stain').
6. Affix a red 'Quarantine' tag to each defective unit or pallet. Write the quarantine ID number, date, and your initials on the tag. Take a clear photograph of the defect and upload it to the WMS record.
7. Move the tagged defective material to the designated quarantine zone. Place it in a clear plastic quarantine bin or locked pallet cage. Ensure the area is clearly marked with a 'Quarantine – Do Not Use' sign.
8. Complete the Defective Material Report (DMR) form, including supplier name, purchase order number, part number, quantity, defect description, and recommended action (return, rework, or scrap).
9. Submit the DMR electronically via SupplyGrid WMS or physically to the Inventory Manager. The system will automatically update the inventory status to 'Quarantined' and remove the quantity from available stock.
10. If the shipment contains a mix of good and defective material, process the good material into inventory as normal. Ensure the defective units are not accidentally scanned into available stock.
11. Notify the Purchasing or Supplier Quality team via email or the WMS notification system within 1 hour of completing the quarantine process. Include the quarantine ID and DMR number.
12. If the defective material is time-sensitive (e.g., perishable raw materials), escalate immediately to the Inventory Manager for expedited disposition.

5.0 Verification & Discrepancy Reporting

1. After quarantining, run a 'Quarantine Report' in SupplyGrid WMS to verify that the system count matches the physical count of quarantined units. Any mismatch must be investigated within 30 minutes.
2. If the physical count of defective material differs from the system count by more than 2% of the shipment quantity, escalate to the Inventory Manager immediately. Do not proceed with disposition until the discrepancy is resolved.
3. If the defective material is found to be a health or safety hazard (e.g., sharp edges, chemical leaks), attach a red 'Danger – Do Not Handle' tag and notify the Safety Officer in addition to the Inventory Manager.
4. For supplier returns, the Purchasing team will issue a Return Merchandise Authorization (RMA) number. Attach the RMA to the quarantine tag and update the WMS record with the RMA number and expected return date.
5. If the defective material is approved for rework or scrap, the Inventory Manager will update the WMS status accordingly. The material must remain in quarantine until the status change is confirmed in the system.
6. All quarantine records must be retained for a minimum of 12 months for audit and supplier performance tracking purposes.

Regulatory Disclaimer: This document is a generic operational template provided for educational purposes. The end-user assumes all liability for reviewing, adapting, and validating all step sequences and material handling protocols against local shop capabilities.