General Mills Packaging Supplier Manual

Version 3.2

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External Quality Management - Packaging

GENERAL MILLS PACKAGING SUPPLIER MANUAL CONTENT

As part of the ongoing focus on our supplier food safety, regulatory and quality assurance program, the General Mills Incorporated (GMI) Packaging Supplier Manual has been developed to bring clarity to key program requirements.

The Packaging Supplier Manual states the minimum requirements that shall be followed to ensure that food safety, regulatory and quality standards of current and prospective packaging material vendors meet GMI requirements.

In this manual, you will find an overview of quality, food safety requirements, and expectations around communication of changes and exceptions.

Any questions, comments or suggestions related to the General Mills Packaging Supplier Manual should be directed to your GMI XQM Packaging Manager contact.

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GMI SUPPLIER COMMUNICATION OF CHANGES

All facilities shall have a program that assures appropriate and timely communication to General Mills of any change that may affect the General Mills packaging specification, food safety and quality or composition. GMI approval shall be granted prior to implementation of changes.

For example:

- Facility Critical Control Point (CCP) change
- New producing location
- Company name change (GMI Notification Only)
- Structure change or other change to raw material

For any temporary change, an XQM-approved exception decision shall be in place. For any permanent changes, GMI XQM and R&D teams shall both approve any changes prior to implementation. GMI may request further testing from the vendor to verify that key specification requirements are still met by the new material.

GMI SUPPLIER APPROVAL AND MAINTENANCE

As part of the GMI Supplier Management Program an assessment is required for new production locations to ensure our suppliers meet GMI requirements and demonstrate an effective food safety culture.

The GMI Global External Quality Management (XQM) Team is responsible for all initial approvals of vendor/supplier producing locations.

The initial assessment is an integrated part of the overall vendor/supplier approval. Completion of a Supplier Survey as well as return of supporting documentation is required, including but not limited to:

- Process Flow Diagram
- HACCP Plan
- Third Party Audit Report, Certificate and Corrective Action Report. General Mills has a preference for GFSI recognized schemes (e.g., IFS, FSSC, BRC, SQF).
- Hold Procedure
- Water Ingress Policy

These may be submitted to GMI through the GMI Global Audit Program (G-GAP) or sent to the GMI contact that initiated the request. Upon review, an audit of the facility may be conducted with approval for specific packaging materials by producing location.

All approved vendor/supplier producing locations for GMI will be re-audited on a risk-based frequency. Suppliers shall provide updated documentation at any point of time when it is requested by GMI.

All approved vendor producing locations for GMI shall provide General Mills with a copy of the third-party food safety and quality systems audit report, certificate, and corrective action report annually to demonstrate effective food safety program and food safety culture. General Mills has

a strong preference for GFSI recognized schemes. GMI may accept other auditing schemes on a case-by-case basis.

Third party audit documentation should be sent to supplier.documentation@genmills.com for suppliers to GMI North America or xqm.support@genmills.com for suppliers to all other regions.

REGULATORY COMPLIANCE

All GMI packaging materials shall meet all applicable regulatory requirements for its intended use. Packaging suppliers are responsible for maintaining regulatory compliance at all times. Packaging materials shall be produced and shipped in compliance with applicable local, state, federal and international regulations. It is GMI's policy to comply fully with the laws which govern and regulate the food and food packaging industry. Examples include but are not limited to all regional laws prohibiting PFAS, BPA, phthalates, MOSH, MOAH and any other chemicals of concern in food packaging.

All materials supplied to GMI shall be suitable for the intended use in food packaging and in all respects, including conditions of manufacture, storage, and shipment, be in compliance with all applicable regulations. When the material is intended for use as a direct food contact material, a signed GMI Packaging Material Guaranty Letter, based on its intended food use, must be on file with GMI's Food Safety and Quality (FSQ) Department.

FACILITY REGISTRATION

All vendor's/supplier's producing locations must be in compliance with the local, state, federal and international licensing, and registration requirements. Owners, operators, or agents in charge of facilities that manufacture, process, pack, or hold food for human or animal consumption are required to register the facility under applicable laws and regulations. This requirement applies to Active Packaging, e.g., BHT.

REGULATORY CONTACTS

- All GMI suppliers shall have a written policy detailing the procedures and responsible persons associated with a regulatory contact and facility inspection.
- The facility shall keep accurate records detailing regulatory agency visits and the resolution to all findings documented by the regulatory agency.
- All GMI suppliers shall notify the GMI Global External Quality Management (XQM) team when any significant regulatory observations are made that would indicate the packaging material may be adulterated or is being prepared, packed, or held under conditions whereby it may become adulterated or rendered injurious to health. This would include all observations noted on FDA Form 483 and comparable forms globally.
- Regulatory contact training shall be documented and shall occur on a frequency that ensures appropriate individuals have an understanding of current, local, and corporate procedures for managing regulatory contacts.

REGULATORY SAMPLING

- Duplicate samples shall be taken anytime regulatory samples are pulled along with clear documentation of what is to be tested. This may include duplicates for finished product testing for pathogens, migration testing, environmental sampling, etc.
- A hold and positive release program shall be in place to accompany regulatory sampling with written clearance by the sampling agency prior to disposition. If a hold and positive release program is not feasible, GMI shall be notified in advance and a written approval from Quality personnel at the receiving plant shall be obtained.
- Supplier's product that has been sampled and partially shipped or in regulatory hold while in transit to GMI shall be communicated to the appropriate GMI contact immediately to ensure hold and clearance prior to use.

In the event packaging materials, either owned by or being shipped to General Mills, is sampled by any regulatory/government agencies, General Mills food safety contact shall be informed of full details of all these inspections of your facilities where this inspection involves the sampling of any material being shipped to General Mills. In all these events, General Mills shall be notified of the lot numbers of materials that were sampled by the regulatory/government agency. If any documents showing General Mills as a customer is shared with the regulatory/government agency, General Mills shall be notified of the documents reviewed and additional information that is relevant to these documents (e.g., Lot codes, PO #'s etc.).

IMPORT REGULATORY REQUIREMENTS

Where GMI is purchasing the packaging materials direct from a foreign supplier, the supplier should comply with all applicable laws, regulations or ordinances of any governmental authority that regulates the import or export of goods and services provided by the supplier, and all reasonable requests from GMI as to the form and manner of such compliance. Such compliance activities shall include, but not be limited to, proper marking of the country of origin of goods, proper labeling, provision of all documentation requested by GMI or as otherwise needed for compliance (such as country of origin certificates, complete product descriptions on invoice) and other compliance measures as required.

In countries where GMI requirements are stricter than defined in local regulations, GMI's requirements outlined in this manual and specifications shall take precedence.

CUSTOMS TRADE PARTNERSHIP AGAINST TERRORISM (C-TPAT) (*SUPPLIERS TO NORTH AMERICA)

As a partner in the Customs Trade Partnership Against Terrorism (C-TPAT) program, GMI requires that all U.S. packaging materials purchased directly from a foreign source with GMI as the importer of record (IOR) be shipped in accordance with the guidelines outlined under the C-TPAT program.

Import operations manage the initial set up of foreign suppliers shipping products into the U.S. when GMI is designated as the importer of record. Supplier requirements under the C-TPAT program will be communicated as a part of that process and a foreign supplier security questionnaire will be provided for completion. Upon receipt back, Corporate Security will assess the current status of that supplier's supply chain security procedures under the program and provide recommendations for further action as needed to meet minimal security requirements. Suppliers who are not currently certified under the C-TPAT program can expect to be placed on a continuing review schedule and should expect and plan for an on-site security assessment to verify the security information provided and the adequacy of site security and logistics programs.

Where packaging materials are purchased from a foreign source and GMI is not the importer of record, the supplier must still comply with all applicable GMI standard requirements and ensure the safety and security of the product in accordance with GMI's policy.

Further information on the program is available by accessing the Customs and Border Protection website at https://www.cbp.gov/border-security/ports-entry/cargo-security/ctpat.

PRODUCT CONTROL, TRACEABILITY AND RECALL

All suppliers shall have:

- An effective traceability program that includes identification, code dates, lot numbers, and documentation throughout all points in the supply chain from incoming raw materials through product shipment to customers including but not limited to raw materials, packaging, premiums, finished product, hold stock, work in progress, destroyed product and rework
- A documented and effective product recall, market withdrawal, and stock recovery program by lot code/code date, material code and quantity.
- Ability to identify, stop distribution, and notify customers and consumers by code date within 24 hours of obtaining knowledge of significant marketplace food safety or regulatory issues that would lead to a product recall or product withdrawal
- Ability to trace one step back from receipt and one step forward from shipping
- An annual traceability exercise program that includes summary results of at least one annual mock recall from raw material to finished good and from finished good to raw material (items traced, time for completion, % recovery, GMI's recommendations is a completion time of maximum 4 hours and 100% recovery of raw materials and finished goods), key learnings, system improvement needs and identified gaps, and documented corrective action taken.

FDA REPORTABLE FOOD REGISTRY (*SPECIFIC TO NORTH AMERICA)

Suppliers are required to report adulteration that would present a Serious Adverse Health Consequence such as death, permanent injury, or irreversible harm (i.e., Class I Recall and BT Act language)

Steps in the process to determine whether to report:

1. Determine scope of issue and, most importantly, perform full risk assessment with this frame of mind
    1. Would situation lead to a serious adverse health consequence?
    2. Is it exempt from reporting? For example, if:
       (a) the adulteration originated with you (i.e., not a supplier);
       (b) you detected the adulteration prior to any transfer of your product to another person; and
       (c) you corrected the adulteration or destroyed your adulterated product.
2. Discuss with impacted customers & suppliers
    1. **General Mills expects discussion prior to reporting (if needed, use 24 hour contact line +1-763-764-2310)**
    2. Decision resides with you
3. Report issue into food registry within 24 hours of determining reportability
    1. Make sure to retain issue number for communication to others
    2. Expect near immediate action from FDA
    3. GMI available for assistance

HOLD PROGRAM

All suppliers shall have:

- A documented hold program that is managed by trained personnel and effectively identifies, isolates, and maintains control of any substandard raw material, in-process or finished packaging material due to potential quality or food safety issues
- A hazardous hold procedure for food contact materials that are on hold due to a food safety issue, that provides additional controls for packaging material security, physical inventory counts and procedures for witness destruction when needed.
- An effective disposition process that ensures only authorized personnel disposition hold products, disposition instructions are followed, and documentation is maintained
- A procedure for handling products that are on hold for multiple reasons
- All suppliers of printed packaging materials shall have a policy documented and in practice for the secure destruction of materials that contain printing or graphics that imply the materials are connected to GMI. This would include but is not limited to rejected and overrun materials. Destruction shall ensure that the materials could in no way be reused.

REWORK

Plant rework policies shall be established, followed, and documented. Rework must be "same into same" only and should be used during the same production run or as early as possible during subsequent a production run.

GOOD MANUFACTURING PRACTICES AND SANITATION

All GMI packaging materials shall meet all applicable regulatory requirements for its intended use and in all respects be in compliance with the Federal Food, Drug, and Cosmetic Act of 1938 as amended and all applicable regulations for the country of manufacture and country of sale. All materials shall be processed/converted, packed, and stored under strict sanitary conditions in accordance with FDA current Good Manufacturing Practices or equivalent based upon the country of manufacture and country of sale. Facilities must develop and implement an effective, documented sanitation and GMP program to ensure regulatory compliance, food safety and sanitary conditions of the facility.

These requirements reflect the minimum expectations but do not supersede any local or national regulatory requirements:

PERSONNEL PRACTICES (EMPLOYEES, CONTRACTORS, TEMPORARIES, VISITORS)

An effective personnel and hygiene practices and procedures for the facility shall be developed. The management team shall be accountable for ensuring all personnel comply with the requirements of the developed standards. Facility personnel, including contractors and temporary employees, shall receive documented personnel practice and hygiene training prior to performing any work or services and refresher training at a regular basis (recommended minimum once per year). Completion of training for each person shall be documented. Facility disease control procedures shall comply with applicable laws and regulations. Food contact packaging vendors shall have documented policies requiring the use of hairnets and beard nets in all GMP and auxiliary areas (e.g., maintenance shops).

OPERATIONAL AND STORAGE PRACTICES

- Waste materials shall be identified and adequately controlled.
- All materials shall be received, stored, and used so as to prevent contamination.
- Adequate perimeter shall be maintained in warehouse and storage areas to allow inspection and cleaning (recommended space: 18" /45 cm).
- Containers and utensils shall be designed, identified, used, and cleaned to prevent them from becoming a source of contamination.
- Physical storage conditions shall be maintained to ensure material integrity.
- Storage surfaces and racking shall be clean and in good condition.
- Raw materials and finished goods shall be stored separately.
- Facilities shall not use finished packaging materials for storage of equipment, parts, or chemicals.

- It is recommended pallets are not stored outside. Where indoor storage is not available, suppliers shall store pallets in such a manner to prevent from becoming a source of contamination or damage including but not limited to: pest harborage, debris, or water. Prior to use in the facility a documented procedure shall be in place to inspect pallets for acceptability.

FACILITIES & UTILITIES

- Grounds and exterior structure shall be designed and maintained to provide protection from environmental elements, pest entry and harborage.
- All openings shall be properly sealed and/or screened at all times.
- Roof shall be accessible and well maintained.
- Interior structures shall be designed and maintained to be impervious and cleanable.
- Facility shall be maintained to be free from loose paint, rust and/or other debris that may contaminate product zones.
- Environmental air, compressed air, and steam utility systems used in contact with food contact packaging, material production or direct product contact surfaces shall be periodically inspected, tested and maintained to prevent systems from becoming a source of contamination. GMI may require annual microbiological testing.
- Traffic patterns of people, machines and materials shall be controlled to prevent contamination.
- Hand wash stations shall be accessible and maintained in good repair.
- Facility shall use potable water that meets applicable laws and regulations. World Health Organization Backflow prevention shall be in place to ensure the integrity of the potable water system tested minimum of once per year.
- Ventilation system shall be adequate to minimize condensation, mold development and prevent pest entry.
- Lighting shall be adequate in handwashing areas, locker and dressing rooms and in all areas where packaging materials are processed, stored, or examined.
- Equipment and utensils are cleaned to enable employees to perform necessary tasks effectively.

WATER INGRESS PROGRAM

Water leakage, condensation, and/or drain back-ups shall be controlled through a documented program to prevent product contamination or microbiological hazards

It is required that the facility shall have a documented water ingress program including:

- Procedure for handling unexpected water ingress including segregation, product evaluation, clean up, documentation, corrective action, etc.
- Evaluation of potential sources of water ingress from roof leaks, condensation, sewer back-up, flooding, fire-sprinkler, other plumbing leaks, etc.
- Documented training on associated hazards and procedures for personnel who are involved with the handling of water ingress

- Procedure to divert roof leaks and timeline within which to execute permanent repairs
- Preventative maintenance program for roofs to ensure roof repairs are completed

EQUIPMENT AND MAINTENANCE

- Equipment shall be designed and maintained to prevent product contamination.
- An effective preventive and corrective maintenance program shall be in place.
- Procedures should be in place to ensure adequate tool controls as well as appropriate cleaning and sanitizing prior to production.
- Product zones and adjacent areas shall be thoroughly cleaned and inspected following completion of equipment/system maintenance or repair. Cleaning and inspection activities shall be documented (e.g., dual sign off, etc.).
- Lubricants shall be designated for use and adequately controlled.
- Temporary repairs shall be documented, effectively managed, and replaced by permanent repairs as soon as possible. Facilities shall maintain temporary repairs in a sanitary condition as to prevent them from becoming a source of contamination
- A calibration program shall be in place for all sensitive equipment. Equipment shall be calibrated against national, international measurement or according to OEM (original equipment manufacturer) recommended standards where applicable.

SANITATION

- An adequate, document cleaning program shall be in place to cover daily and non-daily tasks of production and non-production areas (including drains).
- Facilities shall develop, implement, and have documented sanitation standard operating procedures (SSOPs) including but not limited to cleaning methods, necessary tools, and steps required to complete specific cleaning and sanitizing activities.
- Procedures should be in place to verify effectiveness of cleaning and sanitizing procedures.

  Sanitation tools and equipment shall be dedicated and properly identified for their intended purpose (e.g., food contact surfaces, floor, non-food contact, drains). Drain cleaning/sanitizing tools shall be dedicated and properly identified.

INTEGRATED PEST MANAGEMENT

- An effective, documented pest control program (rodents, insects, birds, and wildlife) shall be in place.
- Program shall be supported by a licensed, certified applicator, and include only certified pesticides in compliance with country regulation.
- Monitoring results, trends analysis and findings shall be evaluated to determine effective short term and long-term corrective actions and proactive prevention.

- Facilities shall have a designated individual accountable to oversee the integrated pest management program.
- When mechanic stations and glue boards are used, an increased monitoring frequency is recommended.
- Toxic bait shall not be used inside areas (e.g., in production areas, warehouse, maintenance shop, etc.).

FACILITY ASSESSMENT

- Internal inspection shall be performed to assess compliance with all regulatory and food safety requirements.

Facility's Internal/Self-Assessment Audit Program shall include GMP inspection and food safety and regulatory program verification.

- Inspections shall include observations of facility condition and employee behaviors in regard to all components of Good Manufacturing Practices
- Inspections shall be performed by knowledgeable personnel
- Inspection frequency shall be documented and occur at a minimum set frequency (GMI recommendation is monthly in production areas and quarterly in other areas)
- Observations/findings/gaps and corrective actions resulted from these inspections shall be documented

Food safety and regulatory program verification shall occur on an annual basis and shall meet the following requirements

- Program verification shall include review of the facility's written programs to assure compliance with applicable food safety and regulatory as well as GMI requirements
- Observations/findings/gaps and corrective actions shall be documented.

A 3rd party shall complete annual audits at the facility and a corrective action plan shall be documented for all audit findings.

CHEMICAL STORAGE & USAGE

- Documented chemical control program shall be in place including approved chemical list, inventory control, preparation, and usage (chemicals for sanitation, maintenance, and stored pesticides).
- Lubricants used in food-contact packaging equipment shall be food grade and adequately controlled and labeled. Food-grade lubricants shall be stored separately from non-food grade lubricants and in a manner to avoid cross contamination.

TRANSPORTATION AND LOGISTICS

Transportation vehicles and containers used for transporting GMI packaging materials shall comply with GMI requirements and applicable laws and regulations to assure the safety and quality of the contents during all phases of transportation.

Prior to loading and shipping, transportation vehicles and containers used to transport GMI packaging materials shall be thoroughly inspected and cleaned as necessary to protect material integrity. The inspection shall be documented.

General Mills follows the GS1 guidelines on pallet level bar code labeling and expects the same from suppliers of packaging materials. (Refer to Appendix L for details).

RECEIVING

All materials shall be received in a manner that protects and assures the safety and quality of the material, complies with applicable laws and regulations, and does not introduce any product safety hazard to the receiving location.

This section states the minimum requirements to be followed as defined by General Mills unless applicable laws and regulations have more stringent requirements.

- Prior to unloading, all vehicle openings and security seals shall be inspected for damage or tampering by a trained employee or an authorized third party designate. All security seals shall be intact, and seal numbers shall be matched to the "Bill of Lading" (BOL) or "Delivery Note." Inspection and results shall be documented.
- A documented inspection shall be completed of all incoming vehicles and shipments to assure the quality and integrity of the shipment. The content and identification of the vehicle shall be verified as correct and match the Bill of Lading prior to acceptance.
- Receipt of all shipments shall be documented to include date received, shipper, vehicle numbers, and description of contents.
- Sampling of ingredients or other materials shall be carried out in a manner which will not contaminate the material or load.

VEHICLE AND CONTAINER ACCEPTABILITY

- The packaging supplier shall be responsible for the sanitary condition and acceptability of the vehicle when loaded and ensure compliance to GMI requirements
- Transportation vehicles and containers (sea going containers, direct contact bulk vehicles and containers, temperature-controlled vehicles, dry good trucks) including pipes and loading/unloading equipment shall be:
    a. In good, safe, and lawful operating condition (e.g. free from structural defects, etc.) for transportation of only food grade materials
    b. Clean, dry, odor free and leak proof
    c. Free of contamination and infestation
    d. Made of food grade materials for direct food contact surfaces
    e. Capable of being tightly sealed to adequately protect the contents and prevent contamination

f. Fully functional to maintain specified temperature (if temperature-controlled vehicle)

- Under no circumstances shall transportation vehicles or containers which have transported hazardous waste, as defined by applicable laws and regulations which includes but is not limited to garbage, trash, asbestos, allergens, toxic, infectious or medical waste be used for hauling packaging materials or be used for a shipment to GMI even after cleaning.
- For suppliers based in the United States or Canada, open-topped or canvas-topped vehicles are unacceptable for shipment of packaging materials to GMI.
- For suppliers outside of the United States and Canada, allowances may vary by region with review and approval of the risk assessment and procedures by the receiving facility FSQ Manager or designate.
- Where used upon approval:
    - Roll top or soft sides shall be in good condition without any holes.
    - Alternate methods may be employed to secure the load and visually inspect the goods for food defense.

VEHICLE AND CONTAINERS INSPECTION

- Each vehicle must have a documented inspection prior to loading to verify the required vehicle and container acceptability criteria is met.
- Transportation vehicle shall be inspected for cleanliness, integrity, closing ability, and shall be properly purged and cleaned prior to loading.
- For any non-hazardous causes for trailer rejections, carriers may clean off-site and return the same day with the same trailer - as long as it is appropriately clean and dry.

VEHICLE LOADING, CLOSING AND SHIPMENTS

- All vehicles and containers shipping GMI packaging materials shall be properly loaded and immediately sealed in order to minimize the risk of contamination or tampering of the load.
- Packaging materials shall not be shipped in mixed loads with other materials where contamination of the packaging material may occur due to foreign substances, toxic materials, off-odors, or other conditions which my render the packaging material unacceptable.
- In order to assure food safety, traceability, and quality the following documentation shall be provided via the Bill of Lading (BOL) or equivalent shipping documentation, minimum requirement:
    - Seal numbers of each security seal attached to the vehicle
    - Vehicle information including transportation company and vehicle number
    - Origin and destination points (name and address)
    - Load description (e.g., name of product, GMI packaging material code, weight, etc.)
    - Code markings or lot identification
    - Quantity of each lot/code marking
    - GMI Purchase Order Number or invoice number
    - Scheduled date of arrival
    - Temperature Requirements and Verification at Time of Shipment (for Temperature Controlled Loads only)

- Hazardous Nature of Material, with rules and regulation governing shipping/handling of such material, if applicable

Note: Missing or inaccurate BOL information may be cause for rejection.

VEHICLE AND PACKAGING MATERIAL SECURITY

- The seal shall be a tamper evident style. The specific style and strength of the tamper evident seal is the suppliers' choice. A broken or missing seal is still a cause for rejection at the shipper's liability.
- The seals are to be placed to reveal unauthorized access.
- Suppliers are not required to seal common carrier less than truckloads (LTL's) not shipped under their control. However, containers shipped on a non-sealed carrier must have individual unitization that is tamper evident.
- If a truck seal must be broken for any reason (e.g., border crossing, weigh station) on a sealed vessel while in transit, the carrier must note the time, date, location, and reason of removal on the bill of lading (BOL). As soon as practically possible, the container must be resealed with the new seal number, time, date, and location of the event noted on the BOL.
- The carrier must inform both the shipping location and receiving location of this change and receive their acceptance prior to continuing on to the GMI facility for unloading. Where possible, the agency breaking the seal should reseal the container with their agency specific seal. It is the suppliers' responsibility to ensure the carrier is aware that the seal can only be broken at the receiving facility by an authorized GMI employee or designate, except as noted above.

PALLETIZING AND LINING

- Prior to shipping, confirm all shipping requirements with the receiving facility.
- The following requirements may necessitate being superseded by specific receiving plant needs, which will be communicated by the receiving plant. It is the supplier's responsibility to know and comply with each plant's particular needs.
- Unit width should not exceed the pallet size.
- Packaging materials are to be secured within the unit load to provide integrity by stretch or film wrapping. A well-secured top cover consisting of plastic wrap, corrugated slip, or solid fiber Kraft slip-sheet is required on palletized units (bags, boxes, fiber drums) to assure maximum unit protection. Dunnage and unitization packaging requirements will be negotiated plant to plant.
- Units shall be movable by standard or multi-tined forklift trucks equipped with slip-sheet handling attachments in such a manner that the load is adequately supported and can be stacked with safety and without damage.
- Total unit weight is predicated by receiving facility's equipment capabilities and safety requirements. Slip sheet must be on top of lower pallet load before placing the second pallet on top. Double-stacked product should be secured to prevent shifting and damage to the load.
- All pallets should be labeled with date of manufacture and quantity of product readable from two sides. Pallets with multiple lots are to be indicated as such and the corresponding number of units and date of production listed on the pallet as well as on the bill of lading. No more than 2 lots can be on any one pallet. Pallets are required to have two adjacent tags readable from two sides.

- Packaging materials shipped in metal or plastic drums shall be unitized on wooden or plastic pallets. The drums shall be strapped together by a non-metallic strap or wrapped with heavy film for stability.
- Pallets shall be managed so they do not become the source of contamination.
- Information on minimal pallet labeling requirements for supplier who send EDI 856 Advanced Shipment Notice to General Mills when shipping against a Purchase Order can be found in Appendix L.

*** VEHICLE SHIPMENTS NOT MEETING THESE REQUIREMENTS MAY BE REJECTED. ***

RETURN OF BULK TRAILERS (GENERAL MILLS PLANT RESPONSIBILITY)

Suppliers should expect that all bulk carriers returning to their facility directly (without any intermediate stops) from a GMI facility will be sealed. If the returned trailers or cars are not in compliance with this requirement, please contact the shipping facility. If unavailable, the XQM team may be contacted for support.

CONSUMER AND CUSTOMER CONTACTS

All suppliers shall have procedures in place to monitor customer complaints related to product quality, food safety and regulatory matters.

Procedures shall also be in place to ensure Quality Notifications (QNs)/Non-conformances from GMI are reviewed and addressed in a timely manner with appropriate response and documented corrective action.

Supplier shall perform regular reviews of non-conformances received from customers. These reviews must be documented and used to identify potential product safety, regulatory, or other significant issues and trends that may require action such as further investigation or communication.

PRODUCT SPECIFICATIONS AND LABELING

All suppliers shall have a specification control program in place that includes clear accountabilities, document control and verification procedures to ensure the correct GMI specifications are being used and available to appropriate personnel.

Suppliers that are supplying a "stock item" to GMI must have their specification available for review. Suppliers shall provide composition information as requested by GMI.

Procedures shall be in place to:

- Obtain approval from GMI prior to making any changes to product, process, specifications, formulas, and converting/producing locations.
- Ensure product is produced to target specifications with a process control plan that includes sampling and quality attribute testing
- Verify product labeling contains all required and accurate information
- Verify packaging material is packed in the right package with the correct label.

*Failure to comply with these requirements will be addressed through the quality notification and noncompliance process which may result in additional action by the receiving location up to and including rejection of the material.

ADDITIONAL GMI SPECIFICATION REQUIREMENTS

The manufacturer of packaging materials shall supply GMI with a list of all the individual components used in the conversion of the packaging material. This information shall be kept confidential and on file in the GMI Food Safety and Quality Team.

Please refer to the Packaging Material Food Safety section of this Manual for more information.

PACKAGING AND LABELING REQUIREMENTS

A packaging material labeling program shall be in place to ensure all products supplied to GMI meet the below label requirements.

Each unit shall be identified with the following information clearly legible at a distance in compliance with regulation:

- GMI packaging material code (including series number/deal code), preceded by "GM" (GMI North America)
- The lot number, preceded by "lot"*
- Quantity of material in appropriate units
- Date of manufacture
- The name of the manufacturer/ manufacturing location/ brokers or distributors

*The term "batch"(or similar) may be used in the place of "lot" if clearly identified and easily discernible on each unit and supporting documentation.

When the units are palletized, they shall be positioned so the GMI material code, lot number and date of manufacture are readable from at least two adjacent sides (four sides preferred).

Closure: No metal clips shall be used for closing the units nor shall metal or plastic ties be used for closing bags within the unit.

Bags/Liners: Package liners must be manufactured according to "food grade" specifications. Poly liners must conform to the food additive order in 21 CFR 177.1520 or, certified as food grade.

STORAGE REQUIREMENTS

All suppliers shall have an inventory management program in place to ensure age management and compliance to first in first out (FIFO) or first expired first out (FEFO) accounting principles.

The supplier is responsible for ensuring their storage conditions or time in storage does not affect the usability or quality of packaging materials at General Mills.

CERTIFICATE OF ANALYSIS/CONFORMANCE

Certificate of Analysis (COA)/Certificate of Conformance (COC) are not required in all regions or for all products unless requested by GMI. Products shall not be shipped until they have cleared testing as required by General Mills specification and supplier's internal requirements unless GMI Quality personnel approvals have been obtained and documented.

If COCs are required, suppliers must have the data collection systems required to generate COCs upon request. COC's must arrive with or be sent to the receiving plant's attention prior to receiving the material in question.

HACCP AND PRE-REQUISITE PROGRAMS

*For this section, "HACCP" refers to HACCP or similar programs.

It is required that food-contact packaging suppliers have an audited HACCP (Hazard Analysis and Critical Control Points) program in place.

It is recommended that all other packaging suppliers have a HACCP or similar plan.

Each food contact packaging supplier location shall have a HACCP plan based upon the 7 commonly accepted principles of HACCP for each producing line and product type including:

1) Documented hazard analysis detailing chemical, physical and biological hazards (including radiological)
2) Identification of CCPs (Critical Control Points)
3) Established critical limits for CCPs
4) Monitoring procedures for CCPs
5) Defined corrective action procedures when Critical Limits are not met
6) Ongoing verification procedures that demonstrate HACCP is working
7) Established record-keeping and documentation procedures

The HACCP plan shall have the following

- Be supported by a multi disciplinary trained Food Safety Team and meets on a regular basis, with minimum annual review and prior to any significant changes.
- Describe the product, distribution and intended use.
- Flow diagram that includes the following
    - Sequence and interation of all steps in the operation
    - Outsourced processes and subcontracted work (as applicable)
    - Where rework takes place (as applicable)
    - When the end product, intermediate product, by-product and waste are released or removed.
- Be validated initially and revalidated after any signficant changes.
- Include identification of hazards from product design to production and through consumption with detailed raw material and process hazard analyses.
- Identify all significant hazards likely to cause illness or injury in the absence of control be designated as Critical Control Points (CCPs) and shall contain
    - Defined critical limits that are established.
    - Monitoring procedures with detailed steps, frequency, person performing the check and documentation and verification procedures to ensure the HACCP plan is being followed.
    - Documented corrective action to address deviation or loss of control that includes root cause analysis, product risk assessment and disposition, and actions taken to regain control.
- Store plan securely, easily retreivable and retained for the shelf life of product.

If our audit procedure finds undue risk in a non food contact facility we may require a HACCP plan and/or sufficient mitigating corrective actions.

Examples of packaging hazards include but are not limited to:

- Physical hazards that could include an inadequate GMP program or employees not following the documented GMP program
- Chemical hazards that could include mixed copy (labels including allergens mixed with labels without allergens or different allergens)
- Microbiological hazards that could include blind swabbing for pathogens or swabbing in zone 1 and/or finished product

FOOD ALLERGENS

For the purpose of this section: food allergens are described as actual allergens and/or packaging that lists an allergen.

All suppliers to GMI shall develop and maintain an Allergen Management Program that effectively controls the risks associated with allergenic cross-contamination of the following materials: peanuts, tree nuts, eggs, milk, fish, crustacean, soy, sesame, and wheat. Additional allergens or sensitizing agents may require control as regulated in the country of manufacture or country of sale. For example: mollusks, mustard, sunflower seeds, sulfites, cereal containing gluten, coconut, etc.

Allergen Management Program shall be reviewed and updated on an annual basis or more frequently if there are any changes in allergen risk.

A documented allergen training program shall be in place to educate all employees (employees, temps, support staff, management, etc.) on the basics of the major allergens and their risks. Training shall be conducted at least annually.

A packaging producing location can become contaminated with allergens through numerous circumstances. A few examples are receipt of raw materials on trailers that previously transported material to a plant that uses allergenic ingredients, returned dunnage that has been used in areas with allergenic ingredients, or food consumed by employees on site.

For printed packaging suppliers:

- Shall be aware of the allergenic ingredients listed on the various labeling they may run.
- Shall be aware of the packaging materials that are labeled with allergenic ingredients to effectively control them and ensure they are not mixed with materials that do not label for allergenic ingredients.
- Shall have a system in place to verify and document the accuracy of labels.
- Bar code reading equipment should be utilized for verification purposes if required.
- Controls and measures should be in place to prevent mixed labeling.
- Storage practices in place to prevent the mixing of allergenic labeled packaging material

Packaging suppliers must evaluate their inks, oil, and/or processing aids for allergens through a supplier approval program.

- If any allergens are identified, these shall be managed through an allergen management program.
- Allergens or the risk of allergenic in these products will require the packaging supplier to implement an appropriate control program.

GMI Base Material Number/Art copy within a shipping unit or pallet must be the same.

- Production runs mixing different GMI base material numbers/art copies (also known as gang runs or combination runs) are prohibited unless there is documented approval by General Mills for specific supplier locations.
- Documentation of such an approval shall be maintained in a General Mills system.

SEGREGATION AND LINE CLEARANCE

All suppliers shall have a line clearance program in place and regularly verify its effectiveness.

Line clearance programs shall be implemented to minimize and/or eliminate the risk of mixed copy. The line clearance program must have a documented procedure that includes production order-based documentation that shall require dual signoffs (employee performing the activity and then a reviewer). Work in process, sorting and rework operations shall have line clearance programs implemented.

For printed, roll-fed materials a sample of the "transition material" shall be saved as evidence that all mixing occasions at product change splices have been taken out of the product flow/stream. Vendors to GMI may be required to retain full-web splices from the slitter on jobs executed in the last three months.

Printed materials shall not be used as dunnage (e.g., tier sheets) for pallets. GMI printed materials (including overrun, waste etc.) shall not be used as dunnage for other customers.

CONTROL OF BIOLOGICAL HAZARDS

Packaging materials supplied to GMI shall conform to all regulatory agencies' microbiological requirements and be safe and suitable for food contact use (if intended) in accordance with Good Manufacturing Practices. Microbiological test results shall be provided to GMI upon request for review.

PROCESSING CONTROLS

Additional controls shall be evaluated to minimize the risk of cross contamination for microbiologically sensitive areas:

- Effective hand washing
- Effective footwear controls
- Tool control
- Evaluation and control of traffic (personnel, materials, and equipment)
- Positive air flow from microbiologically sensitive areas
- Additional controls for construction and unique plant activities

FINISHED PACKAGING MICROBIOLOGICAL MATERIAL TESTING

This is not required for packaging material suppliers. However, if a packaging supplier chooses to implement finished product testing, all packaging materials supplied to GMI shall conform to the following requirements.

- The biological control plan shall include procedures in place for finished product testing with designated sampling location(s), sample size, and frequency of testing to be conducted for each sample.
- A process shall be in place to effectively respond to microbiological results exceeding critical limits including investigation, corrective action, product disposition and customer notification as needed.

- Tests to be conducted shall be documented and performed using standard approved test methods by trained personnel.
- A hold and release program is required if you are conducting any pathogen testing on packaging materials or in zone 1 (product contact areas).
- If product is to be shipped for clearance in transit, GMI must provide documented approval prior to shipment.
- No product or lots confirmed to be positive for pathogens shall be released. Product or lots testing positive for pathogens may be retested for investigational purposes only.

ENVIRONMENTAL MONITORING

If packaging supplier chooses to implement an Environmental Monitoring Program (EMP), the following shall be documented and consists of but not limited to the following components:

- Annual program review
- Monitored plant areas
- Hygienic area designation
- Sampling zones
- List of routine-fixed and routine-variable sites
- Target microorganism(s) for routine sampling
- Sample collection timing
- Sampling device & method
- Separate sampling devices shall be used for each organism at each swab site. If testing for Listeria sp. and Salmonella at one swab site, when using an approved broth method, these can be combined. If also testing for indicator organisms another sampling device shall be used. Cutting one sampling device in half is not acceptable.
- Compositing instructions, if applicable
- Sample analysis detail: handling, shipping, laboratory, test methodology
- Actions for positive results and escalation plan
    - Corrective and preventive actions shall be taken to remediate a positive test result and must be documented.
    - Positive result escalation plan shall include vectoring to identify the root cause.
    - Sites that have been positive for 2 or more times after mitigation shall be sampled monthly
    - Clean and sanitize the positive site and immediate area
        - If the sample was a composite, re-sample individual sites before cleaning and sanitizing.
    - Inspect the site and adjacent area for potential niches and if identified, then repair or remove
    - Take measures to prevent cross-contamination from the site to other locations until fully mitigated.
    - Re-swab the site and continue to vector. Samples shall be taken at least 24 hours apart, and no more than 10 days apart. Test results from the previous samples are not required before the next sample is taken.
    - Identified root cause sites found through vectoring are required to be mitigated.
    - Remediation of the positive test result shall be demonstrated with 3 consecutive negative samples from the positive site.
    - Positive sites shall remain on, or be added to, the routine fixed sampling plan for at least 12 months after the most recent positive result.

- Record keeping
    - Testing result information shall be kept in an organized and accessible manner such that any trends can be easily identified. Test result documentation shall include sample site, zone, hygienic area, date the sample was collected, organism tested, test result, and any pertinent information regarding the sampling event. In the event of a positive test result, a summary of remediation activities and subsequent follow-up testing shall be listed with the initial test result to ensure effective and timely remediation of the issue. Test results shall be trended over time to identify recurrent issues and shall be presented. A graphic representation is recommended.
    -
- Training
    - Personnel whose job function involves collecting swabs, submitting swabs for testing, recording data, responding to positive findings, reviewing data for trends, or executing other aspects of the environmental monitoring program shall receive documented training on the facility's environmental monitoring program and related procedures at least annually

Product contact surfaces (zone 1) shall not be tested for pathogens (including Listeria species) as part of routine environmental monitoring and may be tested for hygiene indicator organisms to verify sanitation efficacy.

For facilities choosing to conduct zone 1 (product contact areas) testing for pathogens, additional controls shall be put in place which include

- validated cleaning procedures
- clean breaks
- supporting documentation
- hold and positive release program
- process to respond to positive test results.

A positive pathogen result on zone 1 surfaces may implicate the finished product produced on that line during the time the positive was found and between clean breaks. When testing finished product, if the results are negative zone 1 finding are not negated; the zone 1 finding must still be addressed.

GOOD LABORATORY PRACTICES

It is strongly recommended that microbiological testing on product be conducted at an ISO 17025 accredited laboratory. Presumptive positive results may be treated as positive without confirmation or confirmed at an accredited laboratory.

All internal laboratories shall have

- Proper Good Laboratory Practices (GLPs)
- Process to validate and verify the accuracy of the results, such as check samples/ ring tests, co-labs, external certification, etc.
- Onsite microbiological testing shall be conducted by a trained technician.
- Shall be kept clean, and equipment kept in good repair, with calibrations performed routinely, as needed.

- Procedures in place to ensure the containment of microbiological hazards and eliminate the potential for cross-contamination to other areas of the facility (i.e., production floor).
- Access to the lab shall be limited to authorized personnel only.
- Must not open directly onto the production floor
- must contain an autoclave, or other sterilization method for all hazardous waste.
- Documented Standard Operating Procedures (SOPs) in place for sample preparations, testing methods, and sample disposal.
- Quality control standards established to verify the accuracy of results, and include duplicate sample analysis, use of positive and negative controls, and routine proficiency testing for all lab technicians.
- Methods used for analysis shall be validated and appropriate for their application

RAW MATERIALS

All facilities shall have a risk-based supplier quality assurance program that ensures the quality and safety of all raw materials along with conformance to approved specifications and all applicable government regulations.

Typical Program Requirements Include:

- New Vendors - Risk based approval process
- Current Vendors – Ongoing maintenance process
- Written specifications for all raw materials
- Continuing guarantees, or an equivalent on file
- Approved supplier list
- Procedures to handle emergency situations when raw material must be purchased from a non-approved supplier
- Non-compliance management
- Raw material receiving procedures

Traceability programs

CONTROL OF PHYSICAL CONTAMINANTS

All packaging materials shipped to General Mills shall be free of hazardous foreign material, and shall comply with General Mills specifications, local laws or regulations.

Suppliers may have a physical hazard prevention, detection, and control program. This program may include strategic placement of strainers, sifters, scalpers, filters, magnets, X-rays, visual sorters, and/or metal detectors at strategic points in the process from point of unloading throughout the process.

Physical hazard detection and control devices shall not be used to clean up known contamination in the raw materials or finished product.

Terminal product protection devices shall be present as appropriate to the material category and product type.

There shall be no further processing or handling between these final product protection devices and the end of the production line.

All physical hazard detection and control devices shall be documented as part of the site's HACCP plan (or equivalent plan) and have an effective management program including:

- Immediate response to findings
- Investigation into source and root cause
- Risk assessment for product produced
- Complete documentation of checks and findings
- Retention of foreign matter through shelf life of product
- Procedures to follow when device malfunctions

Product rejected from physical hazard detection and control devices during normal operation shall not be reintroduced into the process for acceptance and/or shipment. Product may be repassed for investigational purposes only and cannot be released.

In the case of food contact packaging or for non-embedded physical contamination, GMI may require more stringent identification and verification methods. Refer to the material category appendices for material specific control of physical hazards and foreign material requirements.

GLASS, BRITTLE PLASTIC AND CERAMICS CONTROL PROGRAM

It is required that the facility has a documented glass, brittle plastic and ceramic control program including:

- Full inventory and audit of glass, brittle plastics, and ceramics on a risk-based frequency
- Procedure for handling breakage including segregation, product evaluation, clean up, documentation, corrective action, etc.
- Documented training on associated hazards and procedures for personnel who are involved with the handling of glass, brittle plastic, or ceramic.

FOOD DEFENSE MITIGATION

All suppliers shall have a Food Defense Program in place to effectively manage risks to protect GMI packaging from intentional acts of adulteration. Suppliers shall perform a vulnerability assessment for intentional adulteration with intent to harm.

The Food Defense Mitigation Program shall include the following:

- Facility food defense team responsible for food defense plan and training development, implementation, and maintenance. This team will be responsible for investigation of threats or acts of intentional tampering and compliance with food defense regulations.
- Documented Food Defense Plan that includes annual self-assessment, mitigation action plan, emergency contacts, facility profile, food defense team members and FDA registration number (if applicable).
- Documented food defense training for employees, contractors, and temporary employees upon hiring and once per year thereafter.
- Documented personnel policies and procedures to assure persons performing work do not pose risk of intentional harm (hiring practices including preplacement background screening and drug screening, except where prohibited under local regulatory authority).

- Documented physical security policies and procedures to reduce and deter unauthorized access and to protect from exposure to or inadvertent or intentional release of proprietary information (all access and entry points for people/product/ chemicals controlled, employee and non-employee's identification, etc.).
- Documented policies and procedures that support food safety and regulatory including traceability, GMP, transportation and logistics.
- Documented Contingency or Crisis Management procedures shall include effective and immediate response to risk related to food defense.

FOOD FRAUD MITIGATION

All packaging suppliers to General Mills shall have a current and documented Food Fraud Mitigation (FFM) Plan which includes the following:

- A facility FFM team is responsible for investigation of and response to threats or acts of tampering, and non- compliance with regulations.
- Documented annual Food Fraud self-assessment for vulnerability that identifies the highest concerns for all raw materials and finished products, reviews efficacy of current mitigation measures and conducts horizon scanning activities looking for food fraud of tampering for economic gain across the industry (literature, news articles, import notifications, fraudulent activities, etc.).
- Document and report findings for known or suspected, threats of fraud for economic gain.
- Complete annual documented Food Fraud Mitigation Training for all employees, contractors, and temporary employees.

PACKAGING MATERIAL FOOD SAFETY

RESIDUAL SOLVENTS/ANALYTICAL TESTING

Food Contact Packaging materials supplied to GMI shall impart no foreign odor, flavor, or hazardous compounds to food products. Please contact the XQM team for alignment on limits of volatiles associated with printing and laminating. The residual solvents/analytical testing requirement applies to all food contact materials (except metal and glass) and some indirect contact packaging materials as determined by GMI, and the testing may also be completed by GMI if the material supplier/vendor does not have the proper facilities. Further guidance on staying compliant with General Mills' requirements can be provided through the XQM Packaging team.

ODOR/SENSORY TESTING

The food contact packaging materials shall not impart foreign flavor or odor to the products. Packaging materials are evaluated based on GMI internal test method "Jar Odor Test" in combination with actual and/or accelerated shelf-life sensory testing. Please contact the XQM team if you have questions regarding this testing. Packaging for pet food is also evaluated for palatability with pets per GMI internal test method "Standard 2-Bowl Paired Palatability Test." This test requirement applies to all food contact (except metal and glass) and some indirect food contact packaging materials as determined by GMI.

FOOD CONTACT DOCUMENTATION

For all regions, a food grade certificate is required for food contact packaging materials.

In the United States, before any direct food or pet food contact materials may be used, a signed GMI Packaging Material Guaranty Letter must be on file with the GMI Food Safety and Quality (FSQ) Department. The form requires 21 CFR reference and food-types and conditions-of-use designation for the packaging material.

Regions outside of the United States or specific countries may require other food contact material documents including but not limited to migration or mineral oil test results. Use of any post-consumer resins in food or pet food contact materials requires explicit permission from GMI FSQ.

*See an example of a blank template in Appendix K.

GENERAL SPECIFICATION REQUIREMENTS

MATERIAL SPECIFICATIONS

The requirements found in this section shall apply to each individual material specification and suppliers must comply with and fully understand their GMI material specifications.

When applicable, a drawing along with its revision number and date is referenced for each application of an individual specification. The drawing provides details on basic size, style, cutting, printing, scoring, varnishing, etc.

Specifications may not be modified or superseded orally. Modifications or waivers are allowed only if in writing from General Mills.

Suppliers shall not produce materials until they have received the released specification (including the drawing.) If the supplier wants to request changes to the production location, specification, or drawing, they must contact the General Mill ITQ team and provide redlines.

Where details differ between the general and individual specification, the individual specification shall take precedence.

CONTAMINANTS

Materials supplied to GMI shall not be formulated to contain any of the following items-

- Lead
- Cadmium
- Arsenic
- Mercury
- Selenium
- Antimony
- Hexavalent chromium
- Orthophthalates including but not limited to
    - di(2-ethylhexyl) phthalate
    - Di isobutyl phthalate
    - diethyl phthalate
    - butyl benzyl phthalate
- Fluorinated compounds
    - Per- and poly-fluoroalkylated substances
    - Organic fluorinated compounds with at least one fully fluorinated carbon atom

*These provisions apply to components of the material as well as any inks or coatings used in its manufacture.

PRINTING REQUIREMENTS

The print requirements listed below are requirements for suppliers that ship products to North America only. Other regions in the world will have varying requirements.

PRINTING REQUIREMENTS

- Flexo Plates – Printer must use all plates supplied by GMI's Prepress supplier. New flexo printers shall go through a plate qualification process.
- Visual Match: Printed results must visually match inkjet contract proof (provided by GMI prepress supplier partner) for all content and color.
    - Prior to print run, printer must also proof any stepped PDF against supplied inkjet contract proof.
    - All Spot/PMS colors require GMI prepress supplier partner 's approved ink drawdowns prior to production. For gravure printing, cylinder proof may be requested.
    - Print samples and drawdowns should be evaluated under 5000K light in both printer and GMI (and/or prepress) facilities.
- Measurement of Color -

  Instrument: recommended is DE2000, D50/2° or CMC, D50/2°
  Ink Drawdowns: No greater than 2.0 = DE from the Pantone Digital Library
  Print Run: No greater than 2.0 DE from the approved ink drawdown Pantone digital library .cxf data should always be the target for production. Drawdowns are only used to validate color matching ahead of production.

GMI expectation is that all print suppliers will adhere to ISO standards for commercial printing.

- Dot Area – Dot Gain and Density must be within +/- 10% of Suppliers Published Dot Gain and Density Target for CMYK inks.
- Materials must be free of scumming or defects that alter the color or interfere with the legibility of the text and/or scanning of the barcode.
- FTA FIRST guidelines to be followed for all flexographic printed packaging. Or regional equivalent standards.

PRESS PROFILES

- Offset: Gracol specification for G7 to be used for all offset printed packaging or regional equivalent standards.
- Custom profiles will need to be created/provided for other print processes (Flexo, Roto, Dry Offset) or custom offset substrates.

- Flexo profiles and plate curves will need to be supplied to GMI prepress supplier.
    - If profiles and plate curves do not exist, fingerprints will be required.
- Printers cannot alter files* GMI prepress requires a locked file workflow. Graphic changes must be managed through proper GMI teams.
    - Pet Creative (Studio B Production) for all pet brand packaging
    - GMI Brand Experience for all human brand packaging.
- * Standard exceptions would include the addition of position numbers, batch numbers, registration marks, color bars, and supplier logos.
- Bar Codes: QR Codes, 2D Codes, UPC, ITF-14 – Printer is responsible for ensuring that bar codes are scannable at rate at GMI manufacturing facilities, co-packers, and customers.
- Printer is responsible for ensuring that all positions are challenged for numerical accuracy at sufficient intervals throughout the run.
- Printer should adhere to minimum ANSI/ISO barcode quality grades based on the specified print technology:

Flexographic	**Offset/Roto/Digital**	**GMI Criteria**
A,B or C	A or B	Acceptable

D	C	Control limit, corrective actions required
F	D or F	Unacceptable

- All additives or processing aids must be free of allergens. For example:
  - Offset spray containing wheat starch derivatives is prohibited due to allergen concerns
  - Corn starch is prohibited if used in a yogurt or pet food application.
- Refer to Food Allergen section "Combination Run"

WORKFLOW SUMMARY

Along with accordance of all Printing Requirements previously noted in this document, the following is a summary of GMI prepress/print workflow expectations:

General Mills manages packaging graphic materials via strategic prepress partners and a color managed workflow that aligns content and color expectations between all participants from design to printing.

To eliminate the risk of color and content changes after approval by General Mills, we expect the following:

- GMI supplies a color managed contract proof via GMI prepress supplier partner.
- GMI's expectation is that print supplier will match approved GMI file and contract proof (for content and color). GMI nor their prepress suppliers approve additional soft or hard proofs.
- For solid PMS match, the printer is to supply ink drawdowns to GMI prepress supplier partner for approval and are expected to match solid PMS areas to approved drawdowns.
- Typical and preferred GMI workflow does not include press-side reviews. (Exceptions can be made where special circumstance warrants additional oversight. These exceptions require GMI cross-functional approval and support.)

PRINT SAMPLE REQUIREMENTS

- For Pet-branded packaging, print samples should be sent following a first run of a specific graphic design:
- 15 samples to Norwalk, CT location
- 95 samples to Pet Warehouse
- Samples should be taken from the beginning, middle, and end of run
- For all North America packaging, GMI reserves the right to request samples from new or repeat press runs as needed. All print suppliers are to manage retains to fulfill potential GMI print sample requests.
- Receiving locations may require/request advance samples of new graphics for label verification.
- Sample requirements for other regions will vary.

COMPLIANCE MEASURES

- GMI reserves the right to determine print quality deviation and acceptability of printed packaging material. Deviation from spec identified through print quality review may require audit.
- If warranted, a Performance Improvement Plan will be implemented – which may include 3rd party auditing at supplier's expense.

TRAINING AND QUALITY MANAGEMENT SYSTEMS

All facilities shall have

- Procedures in place to ensure all food safety and quality management systems are fully documented with clearly defined accountabilities.
- Change management procedures shall be in place to ensure review and communication of all changes.
- Record management program to ensure proper retention and storage of all related documentation.
    - Records shall be easily accessible and stored in a manner to protect against loss or damage.
- Documented training program to ensure effective onboarding and ongoing awareness for quality and food safety programs and should include
    - Annual refresher for all employees including temporary staff and contractors
    - Cover key topics such as food safety, HACCP, allergens, GMPs, food defense, regulatory compliance, and other job specific topics where applicable.

PROCESS CAPABILITY

Vendors are expected to have adequate control programs to ensure conformance to GMI specifications.

Key metrics that ensure quality of final product should be tracked and retained.

Root cause for potential defects should be understood.

The supplier should be able to provide root cause analysis or corrective action for any defects discovered at GMI producing locations and partners.

OUTTURN SAMPLES

GMI may randomly monitor production samples; however, the accountability for conformance rests with the vendor. Samples are to be provided to GMI upon special request only.

LABORATORY ANALYSIS REPORTS

A statistical summary of requirements outlined in GMI specifications is to be collected on each production lot. Upon request, this information shall be provided to the appropriate GMI XQM Packaging Manager.

APPENDIX A: CONTACTS AND REFERENCES

DEFINITIONS

Packaging Supplier Quality Expectations

The terms used to designate requirements and recommendations stated in this document include:

- Shall, will, must: used to express an obligation or imperative, binding, with no exclusions (i.e., what is mandatory)
- Should: used to express a strong recommendation among other feasible options
- May: used to indicate an action which is permissible, but not mandatory

CONTACTS FOR GMI SUPPLIERS

Use the following links for GMI 3rd Party Audit Submissions:

- G-GAP system
- For North America: supplier.documentation@genmills.com
- For outside North America: XQM.Support@genmills.com

Use the following links for inquiries on Specifications:

- CAD.Team@genmills.com

REFERENCES

GMI Global Audit Program (G-GAP):

https://ggap.my.salesforce.com/home/home.jsp

Allergens:

- Food Allergy Research and Resource Program
- FDA Food Allergens
- FDA Food Allergen Labeling
- Food Allergy and Anaphylaxis Network

Environmental Monitoring Program:

- ICMSF Book 7, Chapter 11: Sampling to Assess Control of the Environment
- GMA Salmonella Control Guidance

Food Defense:

- FDA Food Defense Awareness Training for Employees
- FDA Food Defense Training Information
- USDA FSIS Food Defense and Emergency Response
- AIB Online Training

GFSI:

- https://mygfsi.com

HACCP:

- FDA HACCP Principles Application Guidelines

Water Testing Standards:

- WHO Drinking Water Guidelines
- EPA Drinking Water Standards

APPENDIX B: FILM AND FLEXIBLE LAMINATES

WORKMANSHIP

All flexible packaging materials supplied to GMI shall conform to the accepted workmanship practices outlined below. Where quantifiable parameters are not established, material not considered acceptable or that is exhibiting run-ability issues for these characteristics is subject to rejection.

- Baggy film
- Gauge bands
- Delamination
- Wrinkles
- Roll edge weave – maximum = 0.125 inches (3.175 mm)
- Roll skew/10 ft. length – maximum = 0.25 inches (6.35 mm)
- Curl that impacts run-ability
- Maximum allowable gel size = 0.02 inches (0.508 mm)
- External contamination including, but not limited to, dirt, grease, dust, hair, etc.
- Crushed cores, wrong-sized cores, or loose winds
- Roll side-to-side variation – maximum = 0.1563 inches (3.97 mm)
- Static issues to the extent that the material is not run-able, is not pick-able*, or reduces line performance
- Blocking to the extent that the material is not run-able
- Additive build-up on equipment
- Sticky material due to excess additive
- Excessively deep laser scoring or perforation
- Inconsistent repeat length
- Manufacturer's seal, gusset, or applied zipper failing drop and/or leaker test*
- Misregistration of cold seal adhesive
- Cold seal basis weight outside of minimum/maximum weight
- Offset slitting or splicing

*applies to pre-made pouches only

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

Note 2: Please contact your XQM Packaging Manager for alignment on chemical migration thresholds.

NOTE 3: Printing requirements and defects are specified in the General Specification Requirements section of this manual.

ROLL SPLICING

Flexible packaging materials supplied in roll form shall contain no more than three (3) splices per roll with a maximum allowable average of one (1) splice per roll per pallet on individual pallets. Refer to material application specific specification for details on splice type, color, etc.

APPENDIX C: PAPERBOARD

WORKMANSHIP

Dimensional tolerances:

- Overall sheet size/blank: +/-1/32" (0.8 mm)
- All panels: +/-1/32" (0.8 mm)
- Manufacturer's joint (glue tab): +/-1/32" (0.8 mm)
- Manufacturer's joint skew: 1/8" (3.18mm) maximum

Paperboard packaging materials (hereinafter referred to as "cartons") shall be defect-free. The following are considered defects:

- Clay-peel (board stock shall have good adhesion of the clay-coating to the board fiber)
- Glue-peel (specific to board quality from the mill; must readily accept adhesive – whether cold-glue or hot-melt; Reference: GMI Test Method H13 – WALDORF)
- Contamination with objectionable odors (even if material has passed RSOL testing)
- Contamination with dirt, grease, or other foreign material (board stock shall have a clean appearance – both sides)
- Contamination with embedded metal (cartons shall be able to pass through GMI metal detectors when calibrated with a 3/32" (2.381 mm (about 0.09 in)) series 400 stainless steel sphere)
- Delamination – including blisters (Reference: TAPPI T541 – ZDT test)
- Checking (board stock shall not have a wrinkled or creped appearance on the print side from excessive de-curling)
- Die-cutting / scoring defects including the following:
    - Webbed flaps
    - Cracked or cut scores (not to be confused with perf scores)
    - Missing cuts and/or scores
    - Punctures
    - Improper (misplaced) cuts
    - Easy-open features and/or perf-scores too shallow or too deep (these various features must adhere to the cut depth specified on the respective Drawings attached to the Vendor Specification)
- Insufficient or excessive offset spray powder (specific to sheet-fed converting)
- Excessive edge-dust (specific to conventional steel-rule flat-bed die-cutting) or edge-slivers (specific to rotary pressure-cutting)
- Unglued or poorly glued side-seam (specific to pre-glued cartons; adhesive shall have good bond to both side of the board stock)
- Cartons that are glued together and/or glued shut (specific to pre-glued cartons)
- Scrap within the load (usually specific to flat cartons; yet also known to be present with pre-glued cartons)
- Insufficient or excessive fluff (specific to pre-glued cartons); see NOTE 4 (below).
- Mixed loads of cartons (different art copy graphics shall not be placed on the same pallet)
- Bowing in its various forms including the following: see NOTE 5 (below).
    - Warp (moisture-related bowing in the cross-direction) of more than 0.25" (6.35 mm) per 12" (304.8 mm)
    - Curl (de-curl-related bowing in the machine-direction) of more than 0.25" (6.35 mm) per 12" (304.8 mm)

    - Deformation (odd or irregular bowing in any area of the carton due to scrap in the load, carton damage, banding damage, etc.) of more than 0.25" (6.35 mm) per 12" (304.8 mm)
    - Twist-warp / torsion-warp (bowing at roughly 45-degrees across both the machine-direction and the cross-direction; sometimes resulting from uneven moisture across the web, and sometimes resulting from mechanical issues creating uneven web tension)
- Surface energy (Dyne level) not less than 38
- Palletizing damage

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

NOTE 2: Please contact your XQM Packaging Manager for alignment on chemical migration thresholds.

NOTE 3: Printing requirements and defects are specified in the General Specification Requirements section of this manual.

NOTE 4: Pre-glued cartons shall meet industry-standard guidance for edge-caliper (or "fluff") at 3x board caliper with a range of +/-5 points for board stock up to 18-point. Board stock at 20-point and above may need the edge-caliper to measure 4x board caliper +/-5 points. However, certain receiving plants (whether GMI or contact locations) may need slight adjustments to accommodate particular lines or machines. Case dimensions also need to be appropriate to avoid insufficient "slack" – which can create "flat" cartons – and excessive "slack" – which can create carton damage or deformation – leading to machinability issues.

NOTE 5: It is the desire of GMI to receive cartons that remain flat within 0.25" (6.35 mm) per 12" (304.8 mm) over the temperature and humidity range of 60-80 degrees Fahrenheit and 35-60% Relative Humidity (Reference: GMI Test Method WARP01). Until vendor capability is demonstrated to meet bowing less than 0.25" (6.35 mm) per 12" (304.8 mm), GMI will employ the following procedure:

- When bowing is 0.25–0.50" (6.35-12.7 mm) per 12" (304.8 mm) – within the specified temperature and humidity range – then a negotiated settlement of the claim against the vendor is expected.
- If bowing is greater than 0.50" (12.7 mm) per 12" (304.8 mm) – within the specified temperature and humidity range – the cartons are out-of-specification, and the complaint must be honored.

NOTE 6: Cartons shipped to our receiving plants must be less than 120 days old from the date of manufacture (converting) – unless GMI gives express permission (R&D, Sourcing, FSQ and/or receiving plant). An example of express permission is "bill & hold" items.

SECONDARY PACKAGING REQUIREMENTS

Cartons shall be packaged securely to withstand the rigors of the distribution environment from your producing locations to our receiving locations (GMI plants and/or contract locations). The following are considered requirements; however, each receiving location has express permission to negotiate specific accommodations with your producing locations as needed, and we also

hereby acknowledge that not every producing location will have the requisite equipment to meet each requirement, whereupon exceptions may be granted:

- Flat-packed cartons shall sit atop a corrugated slip-sheet with a pull-tab for appropriate handling with a push-pull truck.
- It is recommended that loads of flat-packed cartons be protected with a compression-shrink bagging system (not stretch-wrapped) and will incorporate a vapor barrier between the cartons and the slip-sheet.
- Pre-glued cartons shall be packed in appropriately sized corrugated cases and stacked on standard heat-treated white-wood pallets.
- Loads of pre-glued cartons shall be protected with conventional stretch-wrap and secured to the wood pallet with poly (not metal) banding in both pallet directions or multi-directional stretch wrap.
- Trailers shall be clean and in good condition, and shall not introduce physical, chemical, or biological contaminants to the cartons and/or the receiving plants.

APPENDIX D: PAPER

WORKMANSHIP

Paper-based packaging materials – regardless of format or style – shall be defect-free. Materials that do not adhere to the following requirements are considered as defective and out-of-spec:

Roll-stock paper packaging:

- No wrinkles across the web
- No buckling across the roll end
- No baggy edges on either roll end
- Roll hardness: target = 55 R (rebound) value +/- 10 R at 90-degrees using original Type L Schmidt rebound hammer technology
- Curl (in either direction): maximum = 0.219 inches (5.6 mm) using the cross-cut method
- Roll diameter tolerance: +/- 0.25 inches (6.4 mm)
- Roll width tolerance: + 0.062 inches (1.6 mm) / - 0 inches (0 mm)
- Roll edge weave (wind oscillation): maximum = 0.125 inches (3.2 mm)
- Roll skew allowance: maximum = 0.25 inches (6.4 mm) per 10 foot length
- Roll outside diameter side-to-side variation: maximum = 0.156 inches (4 mm)
- No external contamination including, but not limited to: dirt, grease, dust, hair, etc.
- No crushed cores, wrong-sized cores, or loose winds
- Core plugs shall have a center hole for removal and shall be flush with roll end.
- No static to the extent that the material is not runnable
- No blocking to the extent that the material is not runnable
- Surface energy (Dyne level) not less than 38
- No more than three (3) splices per roll with a maximum allowable average of one (1) splice per roll per pallet on individual pallets
- No palletizing damage

Cut-and-stack paper packaging:

- No wrinkles
- Curl (in either direction): maximum = 0.219 inches (5.6 mm) using the cross-cut method
- Finished length, width, or diameter tolerance: +/- 0.031 inches (0.8 mm)
- No contamination including, but not limited to: dirt, grease, dust, hair, etc.
- No static to the extent that the material is not runnable
- No blocking to the extent that the material is not runnable
- Surface energy (Dyne level) not less than 38
- No palletizing damage

Multi-wall bag paper packaging:

- Finished bag length (height) tolerance: + 0.25 inches (6.4 mm) / - 0.125 inches (3.2 mm)
- Finished bag width (side-to-side) tolerance: +/- 0.125 inches (3.2 mm)
- Finished bag gusset (front-to-back) tolerance: +/- 0.125 inches (3.2 mm)
- Factory end fold tolerance: +/- 0.125 inches (3.175 mm)
- Factory end fold skew: maximum = 2 degrees
- Step tolerance: +/- 0.125 inches (3.175 mm)

- Hot-melt adhesive position: maximum = 0.125 inches (3.175 mm) from top and side edges
- Hot-melt adhesive amount: coat weight appropriate for application and rate
- No bags glued shut (internally) or glued together (externally)
- No internal or external contamination including, but not limited to: dirt, grease, dust, hair, glass, metal, wood, etc.
- No palletizing damage

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

NOTE 2: Please contact your XQM Packaging Manager for alignment on chemical migration thresholds.

NOTE 3: Printing requirements and defects are specified in the General Specification Requirements section of this manual.

ROLL SPLICING

Paper packaging materials supplied in roll form shall contain no more than three (3) splices per roll with a maximum allowable average of one (1) splice per roll per pallet on individual pallets.

APPENDIX E: GLASS

WORKMANSHIP

All glass packaging materials supplied to GMI shall have no critical defects. Rates of major and minor defects shall be kept below their Acceptable Quality Limits (AQLs). AQLs shall be established contractually prior to the first production of glassware for General Mills and reevaluated on a regular basis.

Defects are classified as:

- Critical are those that present a food or human safety hazard to the user as received or prevent hermeticity of a sealed container.
- Majors are those that could lead to breakage in the production facility or supply chain, could lead to excessive line stops and performance delays, could create a food or human safety hazard, or that materially reduce the usability of the container or its contents.
- Minors are those that do not affect the usability of the container but detract from its appearance or acceptability to the customer. Minor defects should not have a significant effect on breakage rates or line rejection rates.

Critical Defects in Glass Bottles or Containers can include the following:

- Stuck Plug/Sharp Stuck Ware. A piece of glass, usually very sharp, projecting inwards just inside the neck bore
- Over press. It is a defect where a small ridge of glass has been formed on the sealing surface of the finish
- Split. An open crack starting at the top of the finish and extending downward
- Freaks. Odd shapes and conditions which render the container completely unusable. Bent or cocked necks are a common defect of this type
- Soft or Open Blister. A thin blister, usually found on or near the sealing surface. It can however show up anywhere on the glass container
- Choked Bore. Here excess of glass has been distributed to the inside of the finish or opening
- Cracks. Partial fractures, usually found in the heel area
- Pinhole. Any opening causing leakage; it occurs most often in bottles with pointed corners
- Filament. A hair-like string inside the bottle
- Spike. Spikes are glass projections inside the bottle
- Bird Swing. Is a glass thread joining the two walls of the container
- Internal Contamination. Any contaminants not easily removable by the rinser
- Fused Glass. Any loose piece of glass stuck to the container
- Hot plunger/plunger pull. A strand of glass created by incidental contact with the plunger
- Wire Edge. A thin piece of glass projecting above the finish surface
- Chipped or Broken Finish. Pieces broken out of the top edge in the manufacturing process
- Tramp Glass. Extra pieces, shards, or dustings of glass in product, on a case, or on a pallet

Major Defects in Glass Containers can include the following:

- Stone. Small inclusion of any non-glass material
- Rocker Bottom. A sunken center portion on in base of the container
- Flanged Bottom. A rim of glass around the bottom at the parting line
- Hard Blister. A deeply embedded blister that is not easily broken
- Checks. A crack or split that extends (usually) from the finish into the sidewall, sometimes wrapping around the heel

- Poor Distribution. Thin shoulder, slug neck, choke neck, heavy bottom are terms used to describe the uneven distribution of glass
- Knockout Ring.
- Dimensions Out-of-Spec.
- Line Over Finish
- Butterfly Bruise.
- Split head, body, or finish.

Minor Defects in Glass Containers can include the following:

- Sunken Shoulder. Not fully blown, or sagged after blowing
- Tear. Like a check but opened. A tear will not break when tapped, a check will
- Washboard. A wavy condition of horizontal lines in the body of the bottle
- Dirt. Scaly or granular non-glass material
- Heel Tap. A manufacturing defect where excess glass has been distributed into the heel
- Mark. A brush mark is composed of fine vertical laps, e.g., oil marks from molds
- Wavy bottle. A wavy surface on the inside of the bottle
- Seeds. Small bubbles in the glass
- Neck ring seam. A bulge at the parting line between the neck and the body
- Orange peel. Makes the glass look bumpy or foggy
- The glass cannot change the integrity of the original color of the product

The classification of defects such as Critical, Major, or Minor will depend on the application in the final product. Supplier and General Mills shall agree upon acceptable breakage limits prior to the first production of glass ware. This breakage rate may be subject to change based on any major changes to General Mills or supplier line set ups or any significant issues encountered.

Suppliers shall have an inspection program that ensures thorough inspection of every piece of ware through vision, laser, x-ray technology, or physical devices. This inspection shall be deemed capable of detecting defects throughout the ware, especially in critical zones such as the finish and any areas of the ware that come into contact on the line.

The supplier shall have a challenge program that ensures known defects are detected reliably, as well as any defects that are detected at the GMI facility. The supplier may use a library of defect samples to challenge inspection equipment.

The supplier shall have a program in place to respond to critical defects that are detected during inspection, including removing the defective ware and controlling production for a specified period surrounding that ware based on a risk assessment or statistical study. Samples containing critical defects shall not be run through the line again unless as used for challenging inspection, in which case a program must be in place to ensure this sample is removed from the line after challenging.

Each piece of ware must include an identifier in the form of a lot code or Julian date, indicating the production line it was run on as well as the mold/cavity number that formed that piece of ware.

Finish tolerances vary for any given characteristic depending on size and container design. These standards are documented on the Glass Packaging Institute Finish Specification.

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

APPENDIX F: CORRUGATED

WORKMANSHIP

- Dimensional tolerances
  - All panels +/- 1/16" (1.5875 mm) except the panel the tab is glued to. That panel may be cut back a maximum of 1/8" (3.175 mm) only if necessary to meet GMI joint gap specification.
  - Manufacturer's glue joint tab: 1 3/8" (34.925 mm) minimum (unless otherwise specified).
  - Overall sheet size/blank +/- 1/8" (3.175 mm).
- Slot dimensions
  - Depth: + 3/16" (4.7625 mm) over slotted, - 1/8" (3.175 mm) under slotted (from center of inside flap score).
  - Width: 3/8" (9.525 mm) unless otherwise specified.
  - Centering: +/- 1/16" (1.5875 mm) form alignment with center of body score (unless otherwise specified).
- Manufacturer's joint*
  - Gap: 1/4" – 1/2" (6.35 – 12.70 mm) min-max gap range, (target 3/8" (9.53 mm) gap) for 'singlewall' items, or 3/8" – 5/8" (9.53 – 15.88 mm) min-max gap range, (target 1/2" (12.7 mm) gap) for 'doublewall' items
  - Skew: 1/8" (3.18 mm) maximum* for 'traditional' corrugated items, or 3/32" (2.38 mm) maximum* for 'microflute' corrugated items

  *As measured at the intersection of the slot and the horizontal score.
- Blank warp/curl: 1/4" (6.35 mm) maximum per 12" for lines speeds up to 50 cases (or trays) per minute; or 3/16" (4.76 mm) maximum per 12" for lines speeds over 50 cases (or trays) per minute (Reference: GMI method WARP02).
- Scoring: unless specified otherwise in the individual specification, all scores are to conform to the following:
  - Body scores: point to flat.
  - Flap scores: point to point, offset 1/8" (3.175 mm) +/- 1/32" (0.794 mm) measured center to center or hinge type.
  - Must be sufficiently deep to give 180-degree fold without cracking of outer or inner facings. (90 degrees left and 90 degrees right from unfolded orientation.)
- Glueability: must affect a fiber tearing bond under normal production conditions.
- Air resistance (Gurley): 8 second minimum (Reference: GMI method A-44).
- Corrugated packaging materials shall be made in accordance with the packaging specifications and be defect-free. Defects include but are not exclusive to:
  - Contamination including but not exclusive to:
    - Objectionable odors
    - Dirt, grease, water, glass, or other foreign material
    - Embedded metal
    - Organisms such as mold, insects, and rodents
  - Delamination
  - Die-cutting/scoring defects including but not exclusive to:
    - Cracked scores
    - Missing scores/cuts
    - False scores/cuts
    - Misaligned scores/cuts
    - Perforation scores too shallow or too deep
    - Score depth too shallow or too deep

        - Slot depth too shallow or too deep
        - Poor die cut registration
    - Unglued or poorly glued manufacturers joint (when pre-glued is specified)
    - Excess glue (corrugated glued together/glued shut)
    - Too narrow, too wide, or skewed manufacturers joint
    - Scrap within the corrugated or load
    - Mixed or mislabeled loads of corrugated
    - Excessive warp/curl
    - Palletizing damage or issues such as too tight or too loose banding, damaged pallets, etc.

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

NOTE 2: Cases shipped to our receiving plants must be less than 90 days (about 3 months) old from the date of manufacture (converting) – unless GMI gives express permission (R&D, Sourcing, FSQ and/or receiving plant).

NOTE 3: Please contact your XQM Packaging Manager for alignment on chemical migration thresholds.

PRINTING REQUIREMENTS

- Printing copy must agree with GMI specifications and the location of critical elements, i.e., scan codes must be accurate to +/- 1/16" (1.5875 mm).
- Uniform ink coverage is required with no obvious show through the board.
- Edges of printing must be sharp and clean, and the corrugated shall be free of print defects. Print defects include but are not exclusive to print voids, poor print registration, print fill, color variation/mismatch, and washboard.
- UPC scan code requirements are referred to in the Application Standard for Shipping Container Codes - issued by the Uniform Code Council, Inc., June 19, 1996.
- ANSI Symbol Grade code requirements for UPC Code 128 and ITF-14 print quality shall not be less than ANSI grade "C" (Reference: General Mills, Inc. Print Quality Guidelines ITF-14 Bar Code Symbols on Corrugated).
- Additional printing requirements and defects are specified in the General Specification Requirements section of this manual.

CONTAINER COMPRESSION REQUIREMENTS

If listed, compression requirements are the single most important performance requirement in the material specification. If additional criteria such as ECT (Edge Crush Test) or Board Combination listed in the specification conflicts with the vendor's ability to meet the compression requirement, the vendor must contact GMI XQM Packaging Manager immediately to arrange for a specification update.

APPENDIX G: COMPOSITE CANS

WORKMANSHIP

- Liner Standards
  - Foil Surface Finish: Smooth matte.
  - Foil Orientation: Matte side out.
  - Pinholes (Maximum): None through laminate, 150 pinholes/sq. ft., Foil (light box).
- Body Stock Standards
  - Wet Strength: Wet strength in all plies except top and bottom.
  - A minimum of one Julian code must be present and legible per can.
- Label Standards
  - Material Configuration: Printed side out with direction of unwind as specified on art copy.
  - Straight Edge Test - 90.096: Excessive bubbles subject to rejection.
  - Bar Code: Bar code must scan correctly.
  - Wet Ink Adhesion - Test Method 90.093: None.
  - Dry Lamination - No delamination.
- Splices
  - Butt type taped both sides with 1" wide tape of contrasting color.
  - Splices must not break in normal winding operation.
  - Splicing tape shall not exceed slit width of label.
- Metal End Standards
  - Design: Standard/Differential can end with double re-enforcing rings.
  - Chemical Treatment: Cathodic Sodium Dichromate.
  - Mill Lubricant: DOS (Di-(2-Ethylhexyl) Sebacate) & ATBC (Acetyl Tirbutyl Citrate).
  - Press Lubricant: Zurnform V or similar.
  - Ends shall be cut clean and smooth and shall be free of dust, dirt, rust, etc.
  - Pre-curls shall be free of dents, clip outs or any other defect that will interfere with lid or seam quality.
  - End surfaces shall be free of cracks, fractures or any other defect that might permit the dough to penetrate the end upon proofing.
- Explanation of Metal End Designation
  - 55# (55lb per base box), 2 CR (double reduced, 2 cold rolled passes), 0.10#ETP (1/10 lb. electrolytic tinplate), CC (continuous cast), CA (continuous annealed), DR9 (temper), (must comply with current ASTM designations A623, A626, A630).
- Assembly
  - Manufacturer's metal end shall be placed on the Tab Cut end of the can.
  - Customer's end of the tube shall be cut sharp and clean and shall be free of deformations of any sort that interfere with efficient application of customer's metal end.
- Winding Quality
  - Exterior - Cans shall be wound smooth, neat, and free of cracks, tears, wrinkles, scratches through the sealant layer, excessive adhesive, torn tabs, and tube flagging.
  - Interior - Liner shall appear clean with no noticeable dirt or grime and shall be smooth with no bubbles, bulges, tears, splices, or dusty deposits.
- Composite Can Materials will be free of the following defects:
  - Metal Ends
    - Lipouts - Metal End not completed seamed on outside of can
    - Mis-assemblies - General Seaming Defect
    - Knock Out Rod Damage – Black mark on can end

        - Rusty Ends
        - Die Mark
        - Dents
    - Paper
        - Wide Butts - Two sides of the paperboard are not flush up against one another
        - Overlap - Two sides of the paperboard overlap one another
        - Wrinkled Butt Joint or wrinkles in label
        - Busted Butt Joint
        - Flagging - Paper butt joint comes open before seaming
    - Label
        - Offcuts/vertical registration, end to end registration, or label drift - Label is not properly aligned vertically on the can body. (± 3/8" (9.525 mm) from target)
        - Torn Label - Label torn along label overlap
        - Torn Tabs - Torn in excess of 15/32" (11.906 mm)
        - Saw Marks
        - Flagging - Loose label, not folded under metal end
        - Label Splice (Factory and Vendor)
        - Off-slit Label - White or colored line visible at label overlap
        - Label Slip / Label Release - The internal can pressure forces the butt joint to expand which causes the label to slip sideways
        - Label Overlap Folded Back - Backside of the label is visible because the label overlap is folded back
        - Excessive Glue Squeeze Out - Excessive amount of Glue visible at the label overlap
    - Liner
        - Poor Heat Seals - Seal is not complete or not present across envelope fold
        - Fold Defects/anaconda fold - Backside of liner is visible or no envelope fold is present
        - Scratched Liner - Visible scratch that punctures the liner to show the paper backing of the liner or body stock
        - Glazed Liner - Liner is not glued appropriately to the body stock
        - Dry Liner - Liner is not adhered to the body stock
        - Foil Pushdown - Liner not adhered to at the bottom of the can
        - Glue Pattern too far to the left - Target for glue application at the label overlap area not to exceed beyond overlap
        - Glue Pattern too far to the right - Dry strip on overlap should be on the edge of the label only
    - Collar Cut
        - Deep Collar Cut - Collar cut should not be deeper than 0.010" (0.254 mm) into the board stock
        - Shallow Collar Cut - Collar cut knives should cut sufficiently through the label and slightly into can board
    - General
        - Grease on Can Wall
        - Outside Scuff Marks
        - Fiber/Slivers Inside Can - Excessive amount of can foil/fiber in can
        - Inside Knife Flare / Curled Edges
        - Cans with palletizing damage
        - Cans that are contaminated with dirt, grease, or other foreign material

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

APPENDIX H: RIGID PLASTICS

WORKMANSHIP

- Visual Defects - The following are visual defects and may result in the rejection of materials:
  - Flash more than 1/32" (0.794 mm) at parting line or strip area
  - Inclusions, blisters, carbon streaks, or specks larger than 1/32" (0.794 mm) in diameter
  - Loose or adhering foreign substances inside the container
  - Gate length or bubble trim greater than 1/16" (1.5875 mm)
  - Pressure burns
- Functional Defects - The following are functional defects and may result in the rejection of materials:
  - Short shots or containers with incompletely filled mold areas
  - Stress cracking due to improper molding conditions
  - Flash more than 1/64" (0.397 mm) at right angles to the seal area on containers with heat-sealing surfaces
  - Any variability in the elevation, smoothness, or flatness of the sealing surface that prevent the lid from being completely sealed to the containers (i.e., leakers)
  - Angel hair that could detach and become a source of contamination
  - Warping/out of round/ovalization that impacts run-ability
  - Dents that impact run-ability
- No palletizing damage

ADDITIONAL REQUIREMENTS

- Part Identification – Each part shall have an embossed or engraved mark to allow for identification of mold cavity position.
- Resin Identification Code (RIC) – Each part shall be labeled with the appropriate RIC in compliance with ASTM Standard D7611/D7611M. IMPORTANT: ASTM has updated the symbol from three chasing arrows to an equilateral triangle. When a new or replacement mold is created an equilateral triangle must be used in place of chasing arrows. Vendor is expected to follow any state or federal labeling requirements when applying RICs to package.
- Addition of pigments, additives or density modifiers can only be used if they do not affect the recyclability of the package in accordance with the Association of Plastic Recyclers Design Guides.
- Cold Temperature Crack Resistance – Each plastic container will be evaluated for its resistance to cracking at zero degrees Fahrenheit. The plastic container must maintain its ability to withstand the established level of resistance to cracking.

NOTE 1: Where details differ between the general and individual specification, the individual specification shall take precedence.

APPENDIX I: METAL

All metal packaging materials supplied to GMI shall conform to the accepted workmanship practices outlined below. Material not considered acceptable for these characteristics may be subject to rejection.

Cans

- Cans shall be palletized such that they do not shift in transit, nor will they be damaged by overly tight strapping
- All dunnage material (pallet, straps, slip sheets, corner posts, top frame, etc.) shall be in good repair and both dunnage and cans shall be free of contamination
- Cans shall be free of internal and external coating defects, including but not limited to coating discontinuities, overbaked coating, coating drips, stripe defects, and blisters.
- Cans shall be free of structural defects, including but not limited to: beader scrap marks, significant scratches, improper bead profile, flange defects, incomplete trim, weld defects, and laminations.
- Can dimensional attributes shall be within the tolerances necessary to create a consistent, effective double seam.
- Cans shall have a readable, traceable production code date (or multiple as applicable).

Ends

- Ends shall be packaged such that the curls are protected from damage during storage and transit, and sleeved to the specification of the receiving facility
- Ends shall be free of internal and external coating defects, including but not limited to coating discontinuities, excess or missing postcoat, compound smear, compound skips/voids, and excess or missing compound.
- Ends shall be free of structural defects, including but not limited to curl wrinkles, score fractures, rivet fractures, dents/scratches, tab defects preventing use of the end, and curl defects.
- End dimensional attributes shall be within the tolerances necessary to create a consistent, effective double seam.
- EZ open ends shall have a readable, traceable production code date. Sanitary ends shall be traceable to a pallet level.

Closures for Glass Jars

- Closures shall have enough appropriately cured gasket material that ensures a proper hermetic seal with the finish of the container under typical manufacturing conditions
- Closures shall be free of coating defects, thread defects, and aesthetic defects.

APPENDIX J: PEEL-OFF COUPON AND ADHESIVE LABEL MATERIALS

WORKMANSHIP

- For coupons and stickers only include the following information on the inside roll core label:
  - mmddyy-month, day, year of production
  - s – shift
  - l – web lane
- Coupons and labels shall be suitable for operation on automatic labeling equipment (i.e., Labelaire or Label Jet equipment).
- Coupons shall not stick together or demonstrate adhesive bleed when stored at 40 – 80% relative humidity and 40 – 100 degrees F (4 – 38 degrees C). When stored under these conditions, shelf-life shall be one year.
- Splicing
  - Splices shall be kept to a minimum.
  - Splices shall be "butt-spliced" with 1 in (25.4 mm) splicing tape on the back side of the release liner flush with the edges.
  - The maximum allowable splices per roll shall be three (3).
  - The average number of splices per roll through the run shall equal one (1).
- With labeling equipment clean and maintained in good operating condition and with tensioning devices properly adjusted, the average number of web breaks per roll shall be two (2) with a range of zero to three (0 – 3). Rejection will occur on the third break.
- Perforation (for peel-off coupons, if applicable)
  - The perforation pattern of the face sheet shall have a tie-to-cut relationship, which will prevent the perforations from tearing during the label application.
  - The backing sheet shall not have perforations.
  - The coupon must be perforated well enough for customer removal.
- Labels shall be free of any imperfections such as wrinkles or ragged edges which make them unsuitable for their intended use.
- The label position number for the peel-off coupons should be communicated by General Mills.
- The UPC code must be readable. Lasercheck report equipment is used to scan the UPC code being printed on the label. This is completed every finished press roll.
- When the coupon is removed, it must not curl more than 0.25 in (6.35 mm (about 0.25 in)). The strength of the two bonds can be adjusted from a light release up to a hard release; however, this will not affect the coupon to remain flat once released.
- Once the coupon is removed, the coupon cannot stick to other coupons during process and handling.
- All coupons and adhesive labels supplied to General Mills shall conform to the accepted workmanship practices outlined below (if applicable). Where quantifiable parameters are not established, material not considered acceptable for these characteristics is subject to rejection.
  - Folds must be even.
  - Materials must be cut square and not skewed more than 0.0625 in (1.5875 mm).
  - Materials must be flat and not warped more than 0.0625 in (1.5875 mm).
  - Materials must peel from backing cleanly.
  - Materials should be free of excess paper or trimming.
  - No crushed cores, wrong-sized cores, or loose winds.

- Roll edge weave maximum = 0.125 in (3.175 mm).
- Roll skew/10 ft (3.048 m) length maximum = 0.25 in (6.35 mm).
- No external contamination including, but not limited to dirt, grease, dust, hair, etc.
- No static to the extent that the material is not run-able.
- No blocking to the extent that the material is not run-able.

SHIPPING REQUIREMENTS

- Container
  - Strength of the container shall meet the vibration and drop requirements of US ISTA Project 1A and the compression requirements of ASTM D4577-94 or regional equivalent test methods.
  - Size will be determined by supplier.
- Labeling
  - Two adjacent sides must be printed in the largest letters possible that will fit the container with: INTENDED FOR FOOD USE.
  - Two adjacent sides must be printed in the largest letters possible that fit the container with:
    b. Supplier Name and Address
    c. Quantity per Case
    d. Production Code (date and shift)
    e. Material Number
    f. Purchase Order Number (to supplied by GMI Purchasing)
    g. Sequential Carton Number (1 of ...)
- Packing and Closure
  - The items are to have uniform orientation in master carton.
  - There is to be no banding.
  - Product must be properly protected to prevent damage during packing, shipping, and storage.
  - Cartons must be sealed with 2 in (50.8 mm) tamper evident tape in an "H" pattern on the top and bottom of the cartons. Metal closures are prohibited.
  - Master carton minor flaps in and major flaps out on both top and bottom of master cartons.
- Weight
  - Container cannot exceed 35 lbs. (12 kg); unless specified by vendor.
- Carton Liner
  - Cartons shipping to a GMI manufacturing plant must be lined with a 1.5 mil (minimum) LDPE poly bag.
  - Poly liners must not be sealed with tape or metal closure; bags shall be folded over.
- The following procedures apply only to Coupon/Sweepstakes Cards:
  - Destruction procedures are as follows:
    - The plates are to be destroyed.
    - Print waste should be kept in a secured area until destroyed. Print waste must be destroyed within 24 hours of production run.
    - If game negotiable instruments are to be shredded by a firm other than the printer, the negotiable instruments should be damaged by cutting prior to shredding. Precautions must be taken to ensure that there is no exposure to theft before actual destruction by shredding.
    - Destruction of all items must be witnessed and/or documented. Proof of destruction will be provided to GMI upon request.

- Production areas should have security precautions to prevent unauthorized personnel from having access to the printing processes/ materials and printing waste.
- Storage of negotiable material should provide adequate security against theft or exposure to confidential game/promotional plans.
- General Mills reserves the right to witness the actual printing and waste destruction of any winning game piece/coupon production.

GENERAL MILLS, INC.
NORTH AMERICA PACKAGING MATERIAL GUARANTY

Specification	**Supplier and/or Distributor Name :***

***If you are a distributor, please list your company and also the name of the packaging supplier you distribute for.**

TYPE OF FOOD: **CONDITIONS OF USE:**

Material Structure (Outside to Inside)	**Component Manufacturer/Designation**	**CFR Reference for each layer**

The undersigned (hereinafter called the "Seller") does hereby guarantee to GENERAL MILLS OPERATIONS, INC. of Number One General Mills Blvd., Minneapolis, MN 55426 and its parent, affiliates and subsidiaries (hereinafter called the "Buyer") that the above described Material, considering its components (including, but not limited to, processing agents, additives, lubricants & cleaning agents that could migrate to the food contact surface, or otherwise create flavor or odor changes in the food product) and the above described Conditions of Use and Types of Food hereafter sold by Seller to Buyer do and shall at the time of delivery, either be composed of components that are Generally Recognized as Safe, are prior sanctioned, or in all respects comply with the Federal Food, Drug, and Cosmetic Act of 1938, and all acts now or hereafter amending or supplementing the same (including, without being limited to, the Food Additives Amendment of 1958, and all applicable state laws, and where applicable, the Wholesome Meat Act or Wholesome Poultry Act), and are not and shall not be at the time of delivery adulterated or misbranded within the meaning of said acts or laws, and will not cause a product of Buyer, taking into account the Type of Food and Conditions of Use specified above, to be adulterated or misbranded, and are not and do not contain a misbranded hazardous substance or a banned hazardous substance. This is to further guarantee that the above described Material is manufactured from high purity raw materials under conditions which assure its safety for its intended use as described above by the Types of Food and Conditions of Use, and where applicable, meet the certification requirements found in Fabrication of Single-Service Containers and Closures for Milk and Milk Products. This is a continuing guaranty and shall be in force until revoked in writing by the Seller or until such time that another guaranty statement is requested and signed.

The Seller also guarantees the Material does not contain any intentionally added lead, hexavalent chromium, cadmium or mercury and the sum of the incidental concentration levels of these four metals if present in the Material does not exceed 100 ppm by weight. The Seller also guarantees the Material is not formulated with orthophthalates or fluorinated organic compounds. The Seller also guarantees that the Material does not contain any substance, including without limitation any of the foregoing substances, listed pursuant to the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) in an amount that would require a warning to Buyer's employees or others exposed to Buyer's product incorporating the Material.

Signature	Name (print)		Date
Title	Phone	Email	
Company Name			
Company Address			

APPENDIX L: GENERAL MILLS EDI/ASN SUPPLIER PALLET LABELING REQUIREMENTS (SSCC18 LABELS)

General Mills follows the GS1 guidelines on pallet level bar code labeling and expects the same from suppliers for ingredients, packaging materials, finished goods, semi-finished goods, and supplies. The GS1 label guideline document is linked below.

https://www.gs1.org/docs/tl/GS1_Logistic_Label_Guideline.pdf

General Mills uses and requires an SSCC18 (Serial Shipping Container Code) pallet level label for ASN transactions. The bar code style utilized is GS1-128. The bar code minimum height per GS1 guidelines is 1.25 inches and should be centered to include appropriate scan quiet space on the side margins.

The SSCC18 pallet ID barcode label schematic is shown below. The label can include human readable information in addition to the pallet level bar code. Human readable information is not required on the SSCC18 label provided General Mills required information (item code, manufacturing date, vendor lot, quantity, etc.) is visible on the material or an accompanying and affixed pallet placard.

In all cases, the information electronically associated with the pallet label (item code, manufacturing date, vendor lot, quantity, etc.) must match the physical material.

Below is a GS1 example of an SSCC18 pallet label that includes human readable information as well as additional bar codes. Such labels are acceptable for General Mills purposes so long as the SSCC18 pallet label is visible, scan-able, and positioned as the top or bottom bar code (avoid any middle position for an SSCC18 pallet label bar code).

Details for specific minimum pallet labeling requirements for EDI 856 Advanced Shipment Notification to General Mills can be found in the following site address:

http://www.generalmills.com/en/Company/working-with-us/TradingPartners/NAHome/NA-Suppliers