



General Guidance for Developing, Documenting, Implementing, Maintaining, and Auditing an SQF System-Manufacture of Food Packaging

Module 13: Manufacture of Food Packaging

SQF Code, Edition 8.1

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Guidance for Developing, Documenting, Implementing,
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Packaging

Preface

This document provides general guidance for SQF sites, consultants and auditors on the implementation and auditing module 13 of the SQF Food Safety Code for Manufacture of Food Packaging, edition 8.1 (herein referred to as the SQF Code) and can be used where no specific industry sector guidance is available.

The purpose of SQF Code implementation is not only to achieve certification, but to assure constant and continual validate and review of a site's SQF System for currency and completeness.

Effective implementation of the SQF Code requires the commitment of the site management and the constant involvement and participation of site staff to maintain the safety of SQF certified products. The result of effective SQF implementation is not only the protection of public health and company brands, but real improvement through the reduction of waste, recalls and withdrawals, and improved productivity by "doing it right the first time."

The SQF Institute is grateful to the SQF Institute Technical Advisory Council and SQF stakeholders for their assistance in reviewing and contributing to this document.

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Section 1. Introduction

1.1 Purpose of the Guidance Documents

The purpose of this series of SQF Guidance Documents is to assist sites with designing, developing, documenting, implementing and maintaining an SQF System using the SQF Code, and to assist SQF registered auditors in auditing the SQF Code.

The relevant Code version number is identified in the document header. Terms used in these documents are defined in Appendix 2: Glossary.

Guidance is intended to support the SQF Code, but does not replace it. It is not an auditable document, nor is it **intended to be prescriptive to address** every situation. Sites, consultants, and auditors are required to understand the food safety risks in a given industry sector and are able to apply the SQF Code effectively to control those risks.

1.2 Layout of the SQF Code

The SQF Code consists of two parts and four appendices. Part A contains the criteria for implementing and maintaining the SQF Code. Part B is made up of modules containing clauses or elements, which the site must implement as their SQF System. In module 2, the clauses encompass the system elements. Each element outlines where procedures need to be documented, where record keeping is required or where actions must be taken. Module 13 contains the Good Manufacturing Practice requirements applicable to food packaging manufacturing. Sites must meet the requirements of the module or modules.

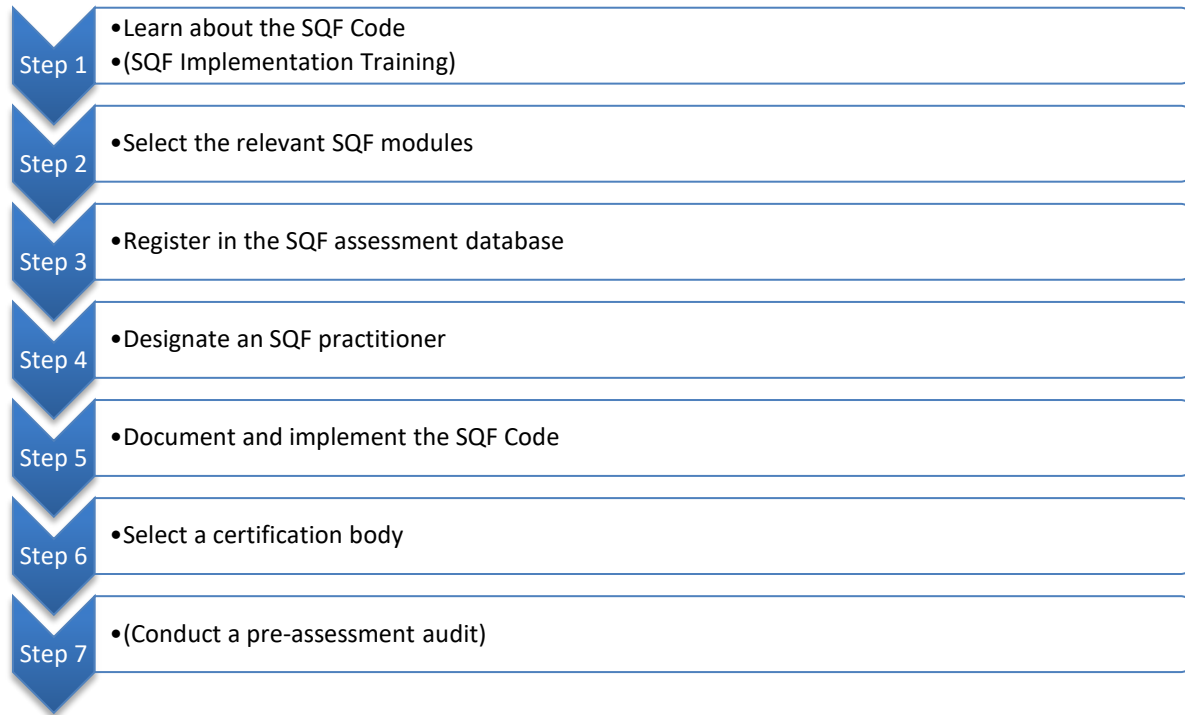
The four appendices in the SQF Code provide additional information needed to implement an SQF System:

- Appendix 1: SQF Food Sector Categories
- Appendix 2: Glossary of Terms
- Appendix 3: SQF Logo Rules of Use
- Appendix 4: Requirements for SQF Multi-site Certification

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Section 2. The SQF Certification Process

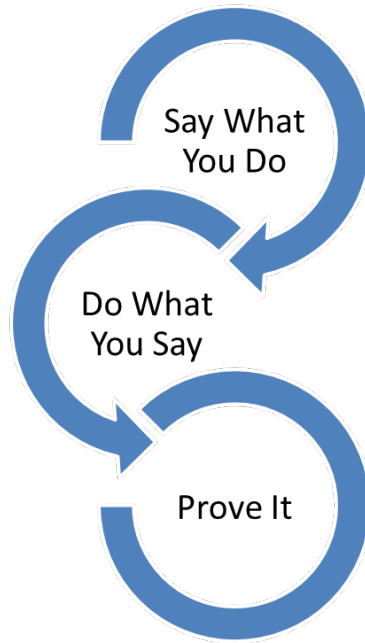
The steps for the process of preparing for SQF certification are shown below. Optional steps or other options are indicated in parenthesis. This process is outlined in section 1 of Part A of the SQF Code, 8th edition.



Section 3. The SQF Implementation Process

To achieve SQF certification, the site must document and implement the relevant modules of the SQF Code. It's also important to provide evidence of the System in the form of documents and records. The implementation process is shown below.

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Document the SQF System – prepare policies, procedures, work instructions and specifications that address the relevant modules of the SQF Code. In other words “say what you do.”

Implement the SQF System – put into place the prepared policies, procedures, work instructions and specifications. In other words, “do what you say.”

Provide records the SQF System – keep records to demonstrate compliance to the relevant modules of the SQF Code. These records provide evidence of the function and control of the System. In other words, “prove it.”

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Section 4. Introduction to This Guide

1. Purpose and Scope of This Guide

The purpose of this series of SQF Guidance Documents is to assist sites with designing, developing, documenting, implementing and maintaining an SQF System using the SQF Code and to assist SQF registered auditors in auditing the SQF Code.

The relevant Code version number is identified in the document header. Terms used in this document are defined in Appendix 2: Glossary of the SQF Code.

This particular guide covers the requirements of *Module 13: Good Manufacturing Practices for Production of Food Packaging*. It covers the Good Manufacturing Practices requirements for the production and manufacture of food packaging that is used other parts of the food supply chain to pack, ship or store food products.

Sites implementing this module must also meet the requirements of *Module 2: SQF System Elements*. Module 2 guidance is a separate document and sites are advised to understand the System Elements, e.g., the requirements of Module 2 before addressing Module 13.

Applicable food sector categories (FSCs) for Module 13 are:

FSC 27: Manufacture of Food Packaging

Guidance is intended to support the SQF Code but does not replace it. It is not an auditable document, nor is it definitive and applicable in every situation. Sites, consultants, and auditors are required to understand the food safety risks in a given industry sector and are able to apply the SQF Code to effectively control those risks.

2. The Structure of the SQF Code

The SQF Code is a process and product certification standard that uses Hazard Analysis Critical Control Points (HACCP) as its foundation. HACCP is a food safety management system based on the principles defined in either:

- The CODEX Alimentarius Commission HACCP principles and guidelines, or
- The National Advisory Committee on Microbiological Criteria for Food (NACMCF)

The main feature of the SQF Code is its emphasis on the systematic application of HACCP to identify, monitor and control food safety hazards in the process flow to manage identified food safety risks.

This guide references the HACCP (Hazard Analysis and Critical Control Point) technique but does not explain the HACCP method in any detail. It requires that those implementing and auditing an SQF System to have completed HACCP training as defined in *Appendix 2: Glossary of the SQF Code* and have extensive knowledge of the HACCP guidelines of either of the above documents, the application of the HACCP principles and experience in implementing HACCP systems. It is not meant to deliver prescribed, absolute rules for implementation, but to be utilized by sites, SQF consultants and SQF auditors as recommendations on practical applications for implementation and certification of the SQF Code.

Fsc	Category	Applicable GMP Modules

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This guidance document describes the requirements of Module 13, which applies to GMP requirements for most manufacturers of food packaging.

3. The Structure of Module 13: Good Manufacturing Practices

An SQF System is a risk management system documented and implemented by the site of food (or related) products to control food safety risks using the SQF Code. It can be audited and certified by an SQF licensed certification body.

The process of how to document and implement the SQF Code and achieve SQF certification can be found in the most current version of Part A of the code.

Module 2 defines the core elements of the SQF Code that provide protection and assurance and are required to be implemented by all sites seeking SQF certification. It forms the foundation of the site's SQF System. It includes the commitment of site management to maintain a safe food supply and the management processes that must be in place to do so such as the HACCP plan(s) that identify and control hazards, product traceability and recall and staff training requirements.

Module 13 expands on element 2.4.2.1 of the system elements (module 2) and details the specific GMP requirements for food packaging.

Module 2	Module 13
2.4.2.1 The site shall ensure the Good Manufacturing Practices described in module 13 (as applicable) of this SQF Code are applied or exempted according to a written risk analysis outlining the justification for exemption or evidence of the effectiveness of alternative control measures to ensure that food safety is not compromised.	13.1 Site Location and Construction 13.2 Construction of Premises and Equipment 13.3 Personnel Hygiene and Welfare 13.4 Personnel Processing Practices 13.5 Water and Air Supply 13.6 Storage and Transport 13.7 Separation of Functions 13.8 Waste Disposal 13.9 Exterior

It is recognized that not all elements of module 13 are applicable to all food packaging facilities. Some elements can be exempted if they are not relevant, and as long as the site has submitted a written request to the certification body prior to the audit, to exclude that element.

There are no mandatory elements in module 13.

4. The Format of the Module 13 Guidance

The following section explains the elements and sub-elements of module 13 and provides guidance on what a site needs to do to develop, document and implement module 13 requirements, and provides information on what the auditor may be looking for to confirm compliance.

The following format is used throughout:

Element Number and Name

Sub-element Number and Name.

This section will describe what the SQF Code requires for module 13. This is the text from the SQF Code, and is the auditable standard. Where there is disagreement between the text of the SQF Code and the guidance, the SQF Code in English prevails.

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Implementation Guidance
<p>What does it mean?</p> <p>This will include the interpretative comments of what the sub-element requires or definitions of the terms used.</p> <p>What do I have to do?</p> <p>This will include suggestions of what is required to be done by the site to document and implement this sub-element. The information provided is not considered exhaustive and may not apply in every situation. It is meant to provide guidance and interpretation.</p>
Auditing Guidance
<p>This will include suggestions of what the auditor may seek as evidence of compliance for this sub-element. The information provided is not exhaustive and may not apply in every situation.</p>

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Section 5. Guidance for Good Manufacturing Practices for Manufacture of Food Packaging (GFSI M)

This module covers the Good Manufacturing Practices requirements for the manufacture of food packaging. Sites implementing this module must also meet the requirements of Module 2 - SQF System Elements for Manufacture of Food Packaging.

Applicable food sector categories (FSCs) are:

FSC 27: Manufacture of Food Packaging

All applicable elements of Module 13 shall be implemented. Where an element is not applicable a request for exemption must be appropriately justified and submitted to the certification body in writing before the audit for approval.

Implementation Guidance
<p>Food contact materials, intended for use in the packaging or transport of food for human consumption, must be sourced, processed and handled in a safe and efficient manner. In order to accomplish this, food packaging manufacturing premises shall be designed to facilitate proper processing, handling and storage of product. Module 13 outlines the general requirements for the construction of premises and equipment in which food packaging is processed, handled, stored and/or transported with guidance on each aspect provided to assist in understanding various requirements. It also details some of the fundamental practices that must be in place to protect the safety of food.</p> <p>While the SQF requirements for Module 13 are “shall do...,” meaning the element MUST be accomplished, where applicable to the site’s specific operation, element 2.4.2.1 provides a method to seek exemption, provided the exemption is supported by a risk analysis. It is the site’s responsibility to develop and present this risk analysis outlining justification for exemption or evidence of the effectiveness of alternate control measures to the certification body and/or SQF auditor for review when questioned.</p>

13.1 Site Location and Construction

13.1.1 Premises Location and Approval

What the SQF Code says

13.1.1.1 The location of the premises shall be such that adjacent and adjoining buildings, operations and land use do not interfere with safe and hygienic operations.

13.1.1.2 The construction and ongoing operation of the premises on the site shall be approved by the relevant authority.

13.1.1 Implementation Guidance
<p>What does it mean?</p> <p>The location and construction of the manufacturing premises are such that neighboring buildings, farms, or factories do not introduce factors that could adversely affect the safety of food (e.g., spray drift from neighboring farms, air-borne pollutants from adjacent factories, etc.).</p> <p>In most jurisdictions, the building and operation of the premises is governed by local, state, and/or federal regulations. The site must be familiar with the applicable regulations and ensure that relevant permits, approvals and notifications are in place.</p>
<p>What do I have to do?</p> <p>The site must ensure the premises and its surroundings are kept free of contaminants to the products from the external environment. The site shall maintain structures, instructions, procedures, etc. that verifies the control of external environmental conditions and for the safety of the process and/or product produced if applicable.</p> <p>For manufacturing and storage facilities, measures may include protection of exposed products or</p>

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materials from air-borne contaminants from neighboring facilities. Measures may also include physical barriers, sealed factories, positive air pressure, etc.

Sites must check with local authorities to establish the requirements. However plans and specifications submitted to a local authority for approval may include:

- Locality map showing the site in relation to the area;
- Site plan showing all salient features of the site and a description of adjoining sites including the location of the premises north compass points, roads, storm water, waste water;
- Floor plans showing the layout of the premises, processing areas, permanent fixtures, and layout of equipment;
- Details of major items of equipment used in the manufacturing area;
- A diagram of product/process flow;
- Specifications generally include details of construction materials, surface finishes (walls, floors, ceilings, etc.), product contact surfaces, essential services and the number of personnel;
- All applicable certificates or inspection documents from local, state, federal or international governing agency shall be current and kept on file.

13.1.1 Auditing Guidance

Any applicable documented protection measures shall be reviewed initially at the desk audit. However, compliance to this requirement shall be reviewed by observation of adjacent facilities and land use and interviews with operational staff at each site audit. Evidence may include:

- Investigation of external environment and surrounding land-use to determine risk;
- Understanding of the site to the risk from the external environment;
- Physical measures in place to manage exterior environmental risks;
- Procedural measures in place to manage exterior environmental risks;
- The measures are effective in managing the exterior environmental risk.

The auditor shall be familiar with the regulatory requirements applicable to the site and check the certificates and inspection documents from the government agency.

To determine compliance, the auditor must walk around the site, inside and out to determine if there are any outside factors that would impact the certified product. This would include potential threats from neighboring facilities or other environmental conditions.

13.2 Construction of Premises and Equipment

13.2.1 Materials and Surfaces

What the SQF Code says

13.2.1.1 In facilities where food contact packaging is manufactured, product contact surfaces shall be constructed of materials that will not contribute to a food safety risk to the manufacture of packaging material.

13.2.1 Implementation Guidance

What does it mean?

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The construction of the material and surfaces used at the site shall be constructed in a way that would be easily cleanable and prevent contamination to the finished product or the process.

What do I have to do?

The main feature of an acceptable product contact surface is that it is impervious, non-corrodible, smooth, easy to clean, light colored, nontoxic and impact resistant. Stainless steel, aluminum, hot-dipped galvanized steel, fiberglass, polyvinyl chloride and nylon are examples of approved product contact surfaces. All other surfaces must be capable of being kept clean and preferably light colored.

Documentation of product contact surfaces being in good condition can be accomplished by making this item a part of a monthly facilities checklist or other type of check list.

13.2.1 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit by interviews, observations and reviews of records. Evidence may include:

- Knowledge of local, state, and federal regulations on the construction and operation of food premises;
- The site has been approved by relevant authorities for construction;
- The site is approved by relevant authorities for production/manufacturing/storage of the applicable products;
- Approval has been sought and given for changes to facilities or equipment.

13.2.2 Floors, Drains and Waste Traps

What the SQF Code says

13.2.2.1 Floors shall be constructed of smooth, dense impact resistant material that can be effectively graded, drained, impervious to liquid and easily cleaned and fit for purpose.

13.2.2.2 Drains shall be constructed and located so they can be easily cleaned and not present a hazard.

13.2.2.3 Waste trap system shall be located sufficiently far away from any food packaging handling area or entrance to the premises so as to prevent contamination.

13.2.2 Implementation Guidance

What does it mean?

Floors, drains and waste traps shall be designed and constructed in such a way as to minimize the risk to product or process safety.

What do I have to do?

Drains shall be easily accessible for cleaning. Grates need to be removable for access and cleaning. Practices must be demonstrated by the site to assess the risks to products and to control those identified food safety risks.

Documentation of floor materials shall be included in the site plan or description of the plant/manufacturing area. Floors shall be provided with proper drainage. Drains need to be positioned and constructed to allow the effective removal of overflow or waste water under normal working conditions. Where drainage and gradients are not ideal, a written SOP shall address the timely and effective removal of waste water to a drain.

13.2.2 Auditing Guidance

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Compliance to this requirement shall be reviewed at each site audit primarily through observations. Evidence may include:

- Floors are smooth and easy to clean with no sign of excessive cracking or deterioration;
- Floors are correctly graded to allow for water run-off;
- Floors are made of appropriate, smooth, dense, impact-resistant material;
- There are no areas of water pooling or build-up;
- Procedures are in place to deal with floor areas that are not correctly designed or constructed;
- Drain locations do not pose a safety risk;
- Drain construction does not pose a safety risk;
- Waste traps are located away from food handling areas or entrances to the site.

13.2.3 Walls, Windows, Doors and Ceilings

What the SQF Code says

13.2.3.1 Walls, windows, ceilings and doors shall be of durable construction and fit for purpose.

13.2.3.2 In packaging manufacturing and storage areas wall to wall and wall to floor junctions shall be designed to be easily cleaned and sealed to prevent the accumulation of debris.

13.2.3.3 In packaging manufacturing and storage areas doors shall be of solid construction and windows shall be of shatterproof glass or similar material.

13.2.3 Implementation Guidance

What does it mean?

This clause is concerned with the design, construction and condition of the buildings that contain food packaging manufacturing operations, specifically the floors, partitions, doors and ceilings. They must be designed and constructed in such a way as to minimize the risk to product safety and in some instances to offer protection to the product. The extent to which these elements are relevant will depend on the type of processes housed and whether the product is enclosed or exposed.

What do I have to do?

Walls, windows, doors and ceilings need to be described in the site plan. Ceiling design and construction must not pose a threat of product contamination. Wall-to-ceiling, wall-to-wall and wall-to-floor junctions must be sealed to prevent build up .

Walls, windows, doors and ceilings must be kept clean as per the cleaning and sanitation program (see 13.2.11).

Today's food premises design generally excludes windows in manufacturing areas. However, older plants may have glass windows. The site must, as part of their foreign matter control program (see 13.7.2), identify any windows that could pose a hazard to unpackaged product if shattered. Windows away from the immediate packaging manufacture and handling areas are generally not recognized as posing a hazard to products being manufactured. Windows close to packaging manufacture and handling areas and skylights that are located immediately above packaging manufacture areas can pose a hazard. Such windows must be constructed of shatterproof material or otherwise covered to prevent glass or plastic fragments from entering product or packaging. Window ledges need to be sloped downwards for ease of cleaning and to prevent their use for unwanted storage of utensils or other materials.

Doors routinely subjected to water must be of solid construction, impact-resistant, non-corrosive materials preferably with a smooth, light colored surface. Doors between packaging manufacturing rooms used to transport product needs to be protected against damage by crates, trolleys, folk lifts or similar traffic.

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For efficiency and ease of cleaning, walls with cement render and smooth-finish glazed tiles, fabricated insulated panels or similar materials are examples of acceptable surfaces. Where light colored finishes do not exist, a written Standard Operating Procedure (SOP) shall address the timely and effective inspection of the adequacy of cleaning and resultant corrective actions when discrepancies are noted.

It is recommended that if light colored finishes do not exist, an inspection shall be included in the internal audit and/or cleaning sanitation schedule. Where floor junctions in facilities are not rounded to enable easy cleaning and prevent the build-up of waste, a written SOP shall address the cleaning protocol to meet acceptable hygienic standards for these areas.

Service ducting, conduit and pipes ideally need to be recessed into walls or ceilings, suspended from ceilings, housed inside drop ceilings with vertical drops to their point of use, or mounted a sufficient distance from walls or ceilings. In other words, they should be constructed to avoid build-up of debris, prevent rodent runs and allow ease of cleaning. Where design does not provide for the avoidance of debris build up, the schedule of cleaning shall be frequent enough to minimize any build up.

Drop ceilings offer some advantages and disadvantages. They can provide a clean, smooth, impervious ceiling surface in the processing area and an area for service runs. However, they can also allow for an "out of sight, out of mind" mentality and can accumulate dust and provide harborage for pests. Drop ceilings, if used, must be checked and cleaned regularly (refer to 13.2.11).

Where drop ceilings are not used, cleaning regimes and inspections must check for dust on ledges, loose fittings, glass windows, light fittings, or other areas where dust can accumulate and fall onto product.

13.2.3 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation. Evidence may include:

- Walls and partitions are of sound construction and made of suitable materials;
- Doors are of sound construction for the volume and type of traffic;
- Ceilings are of sound construction and made of suitable materials;
- Walls, partitions, ceilings, and doors are kept clean;
- Where a drop ceiling is used, the area is kept clean and tidy;
- Service lines are designed and constructed for ease of cleaning;
- The condition of walls, partitions, doors, ceilings, does not pose a food safety risk.

13.2.4 Lightings and Light Fittings

What the SQF Code says

13.2.4.1 Lighting in premises where food contact packaging is manufactured shall be of appropriate intensity to enable the staff to carry out their tasks efficiently and effectively.

13.2.4.2 Light fittings in such areas shall be shatterproof, manufactured with a shatterproof covering or fitted with protective covers and recessed into or fitted flush with the ceiling.

13.2.4.3 Light fittings in other areas where the product is stored shall be designed such as to prevent product contamination.

13.2.4 Implementation Guidance

What does it mean?

Adequate light intensity is required for processing operations, cleaning and inspection tasks. However, the design and construction of lighting can pose a risk to product due to breakage or dust accumulation.

What do I have to do?

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Lighting shall provide minimum lux (foot candle) intensity as prescribed by applicable legislation or in their absence, meet Good Manufacturing Best Practices appropriate to the product being processed. In general, packaging manufacture and handling areas are illuminated to a minimum intensity of 200 lux (18.58 ft.c.). Inspection areas require higher illumination; 500 lux (46.45 ft.c.) is generally recommended.

Light fittings in product handling areas are required to be fitted with protective covers or have shatterproof lights installed. Documentation needs to be kept on file and is to include specifications from the manufacturer with a description of the product. An acceptable practice is to recess the light into the ceiling, where possible or have it fitted flush to the ceiling. Where light fittings are not able to be recessed, they must be protected from accidental damage. In circumstances where light fittings are suspended from cables, the top of the fitting needs to be sloped at an angle that permits easy cleaning. Exposed light fittings must be included in a cleaning and sanitation schedule (refer to 13.2.11).

13.2.4 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation. Evidence may include:

- Lighting intensity is sufficient in packaging manufacture handling areas;
- Lighting intensity is sufficient at inspection stations;
- Lighting intensity is sufficient in warehousing and storage areas;
- Light fixtures are shatterproof or protected, and pose no threat to product safety;
- Light fittings are intact – there is no sign of breakage;
- Light fittings are clean and part of a regular cleaning regime.

13.2.5 Dust, Insect and Pest Proofing

What the SQF Code says

13.2.5.1 All external windows, ventilation openings, doors and other openings shall be effectively sealed when closed and proofed against dust, vermin and other pests.

13.2.5.2 Methods shall be in place to adequately control dust produced by the manufacturing process.

13.2.5.3 Personnel access doors shall be provided. They shall be effectively insect-proofed and fitted with a self-closing device to protect against the entry of dust, vermin and other pests.

13.2.5.4 External personnel access doors shall be provided. They shall be effectively insect-proofed and fitted with a self-closing device and proper seals to protect against the entry of dust, vermin and other pests.

13.2.5.5 Electric insect control devices, pheromone or other traps and baits shall be located so as not to present a contamination risk to packaging, or manufacturing equipment. Poison rodenticide bait shall not be used inside storage areas or manufacturing areas.

13.2.5 Implementation Guidance

What does it mean?

This element is closely related to *13.2.10 Pest Prevention*. This element provides the requirements for physical barriers to pest and dust ingress into packaging manufacture and handling areas via external doors, windows or other means. It also covers the location and use of control measures to trap pests within the premises.

What do I have to do?

The site should be evaluated for potential pests, and preventative measures to prevent the pests from entering the facility shall be implemented. This includes an assessment of lighting that may attract pests. This evaluation may be performed by or in conjunction with a contracted pest management.

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Doors opening directly into packaging manufacture and handling areas must be effectively sealed to prevent dust and/or entry of pests.

Doors used for personnel access shall be self-closing unless used exclusively as a fire exit.

All pest devices used must be approved and used per applicable legislation so as not to present a contamination risk to the product, packaging containers or equipment.

In 13.2.10.4, "bait" refers to poison baits or glue boards. Indicator baits that conform to local regulations may be used inside packaging handling areas.

13.2.5 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation, and records of pest activity (refer to 13.2.10). Evidence may include:

- Windows are closed or protected and sealed against dust or pests;
- Doors are closed or adequately protected against dust or pests;
- Personnel doors have self-closing devices or other method to ensure effective protection;
- External doors are adequately fly-proofed;
- Sealing around trucks in docking areas and dock levelers is adequate;
- Insect devices are located so as not to pose a threat to product, tools or equipment;
- Poison baits or glue boards are not used in packaging handling areas.

13.2.6 Ventilation

What the SQF Code says

13.2.6.1 Adequate ventilation shall be provided in enclosed packaging manufacture and handling areas.

13.2.6 Implementation Guidance

What does it mean?

Poor ventilation can result in condensate build-up in areas where heat or steam are applied or where temperature extremes from hot to cold occur and can result in contamination due to condensate dripping onto product or product contact surfaces.

What do I have to do?

Ventilation in enclosed product handling areas must meet applicable design and construction regulation and prevent condensation over product and surfaces of product contact equipment. Vents and exhausts must be screened to prevent the entry of flying insects (see 13.2.5).

13.2.6 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation and interview. Evidence may include:

- Packaging manufacture and handling areas have adequate ventilation;
- No lingering odors as result of the lack of ventilation;
- There is no condensation present over product or product contact surfaces; and
- Exhaust vents are adequately fly-proofed.

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13.2.7 Equipment, Utensils and Protective Clothing

What the SQF Code says

13.2.7.1 Specifications for new equipment and protective clothing, and procedures for purchasing equipment shall be documented and implemented.

13.2.7.2 Equipment and utensils shall be designed, constructed, installed, operated and maintained so as not to pose a contamination threat to the product, and to allow for cleaning beneath and behind it.

13.2.7.3 Where required, protective clothing shall be manufactured from material that is not liable to contaminate food packaging and easily cleaned.

13.2.7.4 When protective clothing is used, hooks racks or other forms of off the floor storage shall be provided for the temporary storage of protective clothing when staff leaves the manufacturing area and shall be provided in close proximity or adjacent to the personnel access doorways and hand washing facilities.

13.2.7 Implementation Guidance

What does it mean?

A new Code requirement, 13.2.7.1, has been included in edition 8 that requires specifications for equipment, utensils and protective clothing, and procedures for purchasing equipment shall be documented and implemented.

This is a general provision covering the condition and use of equipment, including utensils, benches, tables, bins, and protective clothing, so that they do not pose a threat to product safety.

This also includes the provision that requires specifications for equipment, utensils, and protective clothing new to the site or being repaired or modified. Written procedures are required for the purchasing of equipment new to the site or being repaired or modified and the procedures are to be documented and implemented.

What do I have to do?

Packaging manufacturing equipment shall be designed, constructed and maintained in accordance with the manufacturer and/or industry standards. Metal frames, supports and brackets supporting sinks, wash basins, benches, tables and shelves are generally constructed of solid materials such as hot dipped galvanized iron, stainless steel or aluminium and securely fixed to the walls or on metal frames. Equipment shall be smooth-finished, free from angles, ledges and crevices and easy to clean. The open ends of tubular legs or rails must be sealed to prevent the accumulation of process waste and residues.

Tools and utensils used for the handling of raw materials used for manufacturing of packaging shall be made of a food-safe material that will not deteriorate.

Containers (e.g., tubs, bins, etc.) used for products, input materials or rework must be clearly identified (i.e., color-coded or labelled). Containers previously used for pesticides, insecticides or other deleterious materials must not be re-used for product handling.

Where protective clothing (e.g., gloves, face shields, etc.) is provided and used, it must be made of a material that is food-safe and is easily cleaned. There must be a cleaning regime in place for protective clothing.

Price should not be the only factor when purchasing equipment, utensils and protective clothing. Site's need to consider the role of the new item and choose the right item to do the job.

Written specifications are to be developed that includes the detailed description or features of the item. The goal of the specification is to outline all the technical details and requirements that the site has in mind for the purchased item.

Some things that may be considered for the specification document may include, but is not exclusive to the following:

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- What is needed for the equipment and how the equipment will be used;
- Specific features, capabilities, or construction materials that are needed for that equipment;
- Durability of the item;
- Regulatory requirements;
- Manufactured and designed for use in a food packaging manufacturing site;
- Any required certifications or approvals (i.e., NSF, UL);
- Ease and use of cleaning;
- A receiving document to verify delivery and installation instructions;
- Quantity needed;
- Plumbing needs;
- Drainage requirements;
- Special options or features (ventilation, etc.);
- Service or maintenance requirements;
- Tear down and installation requirements; and
- Cleaning limitations or requirements.

Written procedures for the purchasing of equipment are also to be developed. This procedure is to outline the process in which equipment is identified, purchased and installed on the site. The procedure will assist in the purchasing decisions and choosing the right equipment to handle the required task. Some things that may be considered for the purchasing procedure may include, but not inclusive to the following:

- Regulatory requirements;
- The conditions and requirements when purchasing refurbished equipment;
- Members that are to be on the purchasing committee such as QA, sanitation, engineering; maintenance, etc.
- Conditions; and
- Confirmation from equipment vendors on acceptance of specification prior to manufacturing, modification or repair and confirmation of any installation specifications that may affect food safety.

13.2.7 Auditing Guidance

This element shall be reviewed at each site audit through observation and interview with operational staff. Evidence may include:

- Packaging manufacturing equipment is properly designed to prevent food safety risks;
- Packaging manufacturing equipment is properly maintained to prevent food safety risks;
- Product contact utensils are properly designed;
- Product contact utensils are properly maintained;
- Containers for inedible materials are correctly labeled;
- Waste water and overflow from tanks and tubs is properly drained;
- Protective clothing is provided that is fit for purpose;
- Protective clothing is provided that is made of material that will not contaminate products and is easily cleaned;
- There is a cleaning process in place for protective clothing;

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- Properly designed racks are provided for protective clothing;
- Protective clothing is stored in an area accessible to staff.

13.2.8 Premises and Equipment Maintenance

What the SQF Code says

13.2.8.1 The methods and responsibility for the maintenance and repair of plant, equipment and buildings shall be documented, planned and implemented in a manner that minimizes the risk of contamination of packaging material or equipment.

13.2.8.2 Routine maintenance of plant and equipment in any packaging material manufacturing, handling or storage area shall be performed according to a maintenance-control schedule and recorded. The maintenance schedule shall be prepared to cover building, equipment and other areas of the premises critical to the maintenance of product safety and quality.

13.2.8.3 Failures of plant and equipment shall be documented, reviewed and their repair incorporated into the maintenance control schedule.

13.2.8.4 Maintenance staff and contractors shall comply with the personnel and process hygiene requirements (refer to 13.3.1, 13.3.2, 13.3.3, 13.3.4).

13.2.8.5 Site supervisors shall be notified when maintenance or repairs are to be undertaken in any packaging manufacturing area.

13.2.8.6 The maintenance supervisor and the site supervisor shall be informed if any repairs or maintenance pose a potential threat to packaging material safety (i.e. pieces of electrical wire, damaged light fittings, and loose overhead fittings). When possible, maintenance is to be conducted outside manufacturing times.

13.2.8.7 Maintenance staff and contractors shall remove all tools, spare parts, and debris from any maintenance activity once it has been completed and inform the area supervisor and maintenance supervisor so appropriate hygiene and sanitation can be completed prior to the commencement of manufacturing operations.

13.2.8.8 Temporary repairs, where required shall not pose a food safety risk and shall be included in the cleaning program. There shall be a plan in place to address final completion of temporary repairs in order to ensure they do not become permanent solutions.

13.2.8.9 Equipment located over raw materials, finished food packaging or product conveyors shall be lubricated with food grade lubricants and their use controlled so as to minimize the contamination of the product. Machinery lubricant controls shall be in place to prevent contamination of food packaging from gear box oils, bearing lubricants, hydraulics or any other source.

13.2.8.10 Paint used in a manufacturing area shall not be peeling or flaking and shall not be used on any product contact surface.

13.2.8 Implementation Guidance

What does it mean?

Maintenance activities – both planned and breakdown – can have a major impact on food safety, if not effectively implemented. Maintenance procedures must be carefully planned, designed, documented and implemented to avoid contamination of product, materials or equipment and to ensure that maintenance staff, including contractors, have an understanding of the safety implications of maintenance activities.

What do I have to do?

The protocol must outline that maintenance staff and service contractors engaged to complete work in packaging manufacture and handling areas must observe all personnel and process hygiene requirements. Service contractors must be provided with protective clothing, as required. The procedures must describe the practices under which repairs are to be completed in any packaging manufacture and handling or storage areas including the following requirements that maintenance staff must observe:

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- Maintenance of equipment or building structures must be completed in a manner that does not pose a risk to the product, materials (including packaging materials) or equipment;
- The maintenance supervisors must ensure they are notified by all contractors engaged to complete work in any packaging manufacture and handling areas. They must ensure that all service contractors are aware of the site's personnel hygiene requirements and that they are provided with any necessary protective clothing, or that protective clothing meets the same requirements as those of the supplier staff;
- Maintenance staff and service contractors must ensure that they account for and remove all tools and debris from any maintenance activity once it has been completed in any packaging manufacture and handling area and inform the area supervisor so appropriate sanitation can be completed;
- Service contractors are to inform the maintenance supervisor if any required work poses a potential threat to product, packaging or equipment safety (i.e., pieces of electrical wire, damaged light fittings, loose fittings overhead, etc.). When necessary, maintenance must be conducted outside operational times;
- Service contractors shall notify the maintenance supervisor in the event of any breakage or damage that could expose products, packaging or equipment to contamination;
- Service contractors must notify the maintenance supervisor when work has been completed;
- Plant supervisors and operators must ensure appropriate and effective clean up measures are taken once all maintenance or service contractor activity is completed and prior to the commencement of plant operations.

It is essential that the site's staff, maintenance personnel and service contractors adhere to the correct procedures when completing maintenance on all equipment. As part of maintenance procedures, repaired equipment must be inspected for missing parts (nuts, bolts, springs, etc.) prior to use.

Those responsible for reporting and completing repairs and cleaning the equipment after repairs must be specified in maintenance procedures.

The use of temporary materials such as string, wire, cardboard or tape is not permitted unless they are properly documented and included in any cleaning activities, inspections or internal audits.

Where machinery that exists over product lines or product contact surfaces requires lubrication, only food grade lubricant is to be used. Even then, food-grade lubricant is still a quality hazard and must be used sparingly to avoid contact with product.

Where paint is used on equipment, roofs, walls or floors, it must be in good condition and suitable for use. Paint must not be used on product contact surfaces.

13.2.8 Auditing Guidance

Maintenance schedules and procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site maintenance schedule and procedures shall be reviewed at each site audit through observation, review of records and interview with operational, maintenance staff and contractors. Evidence may include:

- There is a planned maintenance schedule;
- The maintenance schedule includes critical equipment and areas of the site;
- There are maintenance procedures that include food safety issues;
- The planned maintenance schedule is being followed;
- Maintenance procedures afford no risk to product safety and integrity;
- Maintenance procedures are known by maintenance personnel and contractors;
- Maintenance procedures are being followed;
- Maintenance procedures include food safety and hygiene practices;

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- Maintenance staff follow food safety and hygiene practices;
- Maintenance contractors follow food safety and hygiene practices;
- Preventative maintenance activities are documented;
- Plant and equipment failures are documented;
- The maintenance schedule is adjusted for plant and equipment failures;
- Operating staff and supervisors are notified when repairs are made/completed;
- All tools, parts and debris are removed from repair areas;
- Sanitation activity occurs after maintenance repair in packaging manufacture and handling areas;
- Notification occurs when potential risk to product is evident through maintenance activities or breakdowns;
- Temporary repairs do not pose a risk to raw materials or products and are properly documented and inspected;
- Food grade lubricant is used in product contact zones, conveyors, and on all motors over product contact surfaces;
- Food grade lubricant is used sparingly and does not come into contact with food product, materials, or food contact surfaces;
- Paint is not used on product contact surfaces;
- Maintenance records are available and complete.

13.2.9 Calibration

What the SQF Code says

13.2.9.1 The methods and responsibility for the calibration and re-calibration of measuring, test and inspection equipment used for monitoring activities outlined in pre-requisite program, packaging safety plans and quality plans and other process controls, or to demonstrate compliance with packaging product specifications shall be documented and implemented. Electronic equipment being used on a daily basis shall be calibrated daily by the users.

13.2.9.2 Procedures shall be documented and implemented to address the disposition of potentially affected food packaging should measuring, test and inspection equipment be found to be out of calibration state.

13.2.9.3 Calibrated measuring, test and inspected equipment shall be protected from damage and unauthorized adjustment.

13.2.9.4 Equipment shall be calibrated against national or international reference standards and methods or to accuracy appropriate to its use. In cases where standards are not available, the site shall provide evidence to support the calibration reference method applied.

13.2.9.5 Calibration shall be performed according to regulatory requirements and/or to the equipment manufacturers recommended schedule.

13.2.9.6 Calibration records shall be maintained.

13.2.9 Implementation Guidance

What does it mean?

The accuracy of measuring, and inspection equipment that is used to test product parameters (e.g. weight, thickness, color etc.) is essential in ensuring that product meets regulatory, legal and customer requirements. The measurement equipment itself must be tested to ensure correct information is provided to make operational decisions.

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What do I have to do?

Test equipment used to confirm regulatory and customer requirements must be calibrated against a national or international standard.

In cases where a national or international standard does not exist or is not arranged, a reference standard can be purchased or created and/or a standard method (often supplied by the equipment supplier) used.

To ensure that measuring equipment gives reliable results, the site must:

- Identify all the equipment that requires calibration (e.g., scales, callipers, colourimeters etc.).
-
- Ensure the equipment, once calibrated, is protected so that measurements remain accurate.
- Ensure the equipment is only operated by authorized personnel and using approved methods.
- Determine how accurate the measurements need to be. Does the site need to comply with industry or national standards? If the calibration is designed to check measurements implemented to improve a process the site may determine the level of measurement required and apply calibration parameters to ensure consistent measurement. Internal calibration devices must be approved and maintained by an approved service provider.
- Calibrate equipment regularly. The calibration frequency will vary depending upon the type of equipment and its usage. Calibration frequency must be adjusted in light of experience or manufacturer's instructions. Validation of software, for example software used to control manufacturing lines, or other equipment, is to be scheduled and performed according to provider's recommendation (s).
- Develop a procedure to address products produced between the time equipment "out-of-calibration" is discovered and the last calibration check with normal tolerances recorded.

Clearly identify who is responsible for undertaking calibration, recording the results of all calibrations and labelling equipment to indicate when it was last calibrated and when recalibration is due. Where a need for in-line testing has been determined to ensure food safety, quality and/or regulatory requirements then they should incorporate a system to identify non-conforming product for removal and to divert it out of the product flow. Reject systems should be included in any calibration activities to ensure they are performing as designed.

13.2.9 Auditing Guidance

Calibration procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site calibration procedures shall be reviewed at each site audit through observation, review of records and interviews with operational staff responsible for calibration. Evidence may include:

- All measuring, test and inspection equipment is identified;
- Calibration standards are known and followed;
- Calibration methods and frequency are documented for all available measuring, test, and inspection equipment;
- Calibration methods and frequency meet national or international standards where appropriate;
- Calibration methods and frequency meet customer requirements where appropriate;
- Calibration and/or validation methods and frequency meet manufacturer's instructions where appropriate;
- Methods for calibration of equipment include responsibility for conducting calibration;
- Authorized personnel understand the methods for conducting calibration;
- There are procedures in place to address disposition of potentially affected product;
- Potentially affected product is adequately disposed of;
- Calibrated equipment is protected from damage;
- Calibrated equipment is not subject to unauthorized adjustment;
- Calibration records are available and complete.

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13.2.10 Pest Prevention

What the SQF Code says

13.2.10.1 The methods and responsibility for pest prevention shall be documented and effectively implemented. The premises, its surrounding areas, storage facilities, machinery and equipment shall be kept free of waste or accumulated debris so as not to attract pests and vermin.

13.2.10.2 Any identified pest activity shall not present a risk of contamination to raw materials, work-in process, or finished food packaging.

13.2.10.3 Raw materials, work-in-progress or food packaging that is found to be contaminated by pest activity shall be effectively disposed of, and the source of pest infestation investigated and resolved.

13.2.10.4 The pest prevention program shall:

- i. Describe the methods and responsibility for the development, implementation and maintenance of the pest prevention program;
- ii. Record pest sightings and trend the frequency of pest activity to target pesticide applications;
- iii. Outline the methods used to prevent pest problems;
- iv. Outline the pest elimination methods;
- v. Outline the frequency with which pest status is to be checked;
- vi. Include on a site map the identification, location, number and type of bait stations set;
- vii. List the chemicals used (they are required to be approved by the relevant authority and their Safety Data Sheets (SDS) made available);
- viii. Outline the methods used to make staff aware of the bait control program and the measures to take when they come into contact with a bait station;
- ix. Outline the requirements for staff awareness and training in the use of pest and vermin control chemicals and baits; and
- x. Measure the effectiveness of the program to verify the elimination of applicable pests.

13.2.10.5 Inspections for pest activity shall be undertaken on a regular basis by trained personnel and the appropriate action taken if pests are present.

13.2.10.6 Records of all pest control applications shall be maintained.

13.2.10.7 Pesticides and other toxic chemicals shall be clearly labeled and stored as described in element 13.6.3 and handled and applied by properly trained personnel. They shall be used by or under the direct supervision of trained personnel with a thorough understanding of the hazards involved, including the potential for the contamination of food contact packaging.

13.2.10.8 Pest prevention contractors or licensed users shall be:

- i. Licensed and approved by the local relevant authority;
- ii. Use only trained and qualified operators who comply with regulatory requirements;
- iii. Use only approved chemicals;
- iv. Provide a pest control management plan (refer to 2.3.3) which will include a site map indicating the location of bait stations and traps;
- v. Report to a responsible senior management person on entering the premises and after the completion of inspections or treatments;
- vi. Provide a written report of their findings and the inspections and treatments applied and;

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vii. Where applicable, unused and obsolete chemicals are stored under secure conditions while waiting authorized disposal by an approved vendor.

13.2.10 Implementation Guidance

What does it mean?

Pest prevention incorporates the site's integrated pest management (IPM) program as a holistic approach that integrates a range of practices to minimize the incidence of pest activity.

The Food and Agriculture Organization (FAO) of the United Nations defines IPM as "the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment."

In other words, a range of integrated measures are required to minimize pest populations, including mechanical preventions (e.g., sealed doors and windows, air curtains, etc.), mechanical controls (e.g., baits, traps, etc.), waste minimization, appropriate use of pesticides, etc.

This element covers primarily traditional pest management activities, including pesticide application. However, it is related to 13.2.5 Dust, fly, and vermin proofing, which is also part of an overall IPM approach.

What do I have to do?

A fully maintained pest prevention program is essential to the safe function of any packaging manufacturing operation. The pest prevention program must:

- Record sightings and frequency of pest activity to identify the target pest (s) for each pesticide application;
- Outline the frequency with which pest status is to be checked;
- Identify the location of bait stations, traps and chemical sites for ease of checking;
- Outline the methods used to prevent pest problems (the recommendation is to be proactive);
- Outline the methods used when pests are found;
- Maintain licenses and credentials of the pest control operator (s);
- List the chemicals used;
- Assure chemicals used are approved by the relevant authority and that SDS are accessible; and
- Outline the requirements for staff awareness of who is responsible for pesticide application and training in the use of chemicals.

The location of internal and external pest control devices must be completed based on the risk to the site and the product. Factors that can affect this include product type, processing type, location of site, surrounding environment, types of facilities, external storage of equipment (such as equipment graveyards), neighboring facilities and land use. The site and surrounding areas must be kept free of waste, redundant equipment and associated debris to minimize harborage for vermin.

Pest control devices should be located at all product storage and material/input storage facilities in addition to the main manufacturing facilities. Inspections for pest activity must take place on a regular basis, the results recorded and the actions taken if pests are present. This can be incorporated into the operation's internal audit program. The site should consider the effects of seasonal weather and conditions on the pest prevention program. The pest activity trends and other measurement shall be considered and, where appropriate, additional preventive activities may be required.

Examples of records of pest control applications include service reports, pesticide usage logs, pest sighting logs, corrective action reports and trending of activity by the service provider.

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In addition to the pests most commonly seen in packaging manufacturing facilities (i.e., mice, rats, roaches, etc.), pest management procedures need to also consider and control domestic and feral animals and birds where applicable.

Any type of pest activity, including but not limited to flies, mice, vermin, insects, etc., identified within the site shall not pose a risk to the products or materials. Any products that have been found to be contaminated shall be disposed of according to the site's policy. All activity is to be documented with the records clearly identifying the results of the disposal, investigation and outcomes and resolution.

Personnel handling pest control chemicals must be trained and authorized to do so. Where external pest management contractors are used, they must be licensed by the relevant local authority and use only approved pest control chemicals. Chemicals must be stored appropriately and separate from any food materials or products (refer 11.6.4.1), and used chemical containers disposed of correctly.

13.2.10 Auditing Guidance

Pest prevention procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site's pest prevention procedures shall be reviewed at each site audit through observation, review of records and interviews with operational staff and possibly the pest contractor (if applicable). Evidence may include:

- The potential pests are known;
- There is a documented pest management program that integrates a number of preventative as well as control measures;
- The documented pest management program targets all known pests;
- The documented pest management program includes responsibilities for pest management;
- The documented pest management program targets includes methods to eliminate or minimize all known pests;
- The pest management program includes frequencies for checking pest status;
- The pest management program includes the exterior or surrounding areas of site;
- The methods, frequencies and responsibilities identified in the pest management program are effectively implemented;
- External areas are kept clear and free from waste and debris;
- There are no observed pest harborage areas observed within the site or in the immediate surrounds;
- There is a site map of pest control devices;
- Pest control devices meet regulatory requirements;
- There is a list of approved pest control chemicals and the personnel responsible for the application of pesticides is defined;
- Only approved pest control chemicals are used and the application amount is monitored;
- SDS sheets are available for all pest control chemicals;
- Pesticides are correctly labeled;
- Empty or redundant pest control chemical containers are correctly disposed of;
- Pest control contractors are trained, licensed and approved;
- Pest control inspections are thorough and conducted at the correct frequency;
- Site staff are aware of pest control devices;
- Appropriate corrective action is taken in response to pest control inspections;

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- Pest control records are current and maintained.

13.2.11 Cleaning and Sanitation

What the SQF Code says

13.2.11.1 The methods and responsibility for the cleaning of manufacturing and storage areas, staff amenities and toilet facilities shall be documented and implemented.

13.2.11.2 Provision shall be made for the effective cleaning of processing equipment.

13.2.11.3 Adjacent production equipment shall be covered or shut down and raw materials and finished goods shall be moved from the vicinity if using compressed air hoses to clean.

13.2.11.4 Pre-operational inspections shall be conducted following cleaning and sanitation operations to ensure packaging manufacturing areas, product contact surfaces, equipment, staff amenities and sanitary facilities and other essential areas are clean before the commencement of production. Pre-operational inspections shall be conducted by qualified personnel.

13.2.11.5 Staff amenities, sanitary facilities and other essential areas shall be inspected by qualified personnel to ensure the areas are clean, at a defined frequency.

13.2.11.6 The responsibility and methods used to verify the effectiveness of the cleaning procedures shall be documented and implemented. A verification schedule shall be prepared.

13.2.11.7 Appropriate cleaning agents shall be purchased in accordance to applicable legislation. The site shall ensure:

- i. An inventory of all cleaning agents purchased and used shall be maintained;
- ii. Cleaning agents are stored as outlined in element 13.6.3;
- iii. Safety Data Sheets (SDS) are provided for all detergents and sanitizers purchased; and
- iv. Only trained staff handles cleaning agents.

13.2.11.8 The site shall dispose of unused cleaning agents and empty containers in accordance with regulatory requirements, where applicable, and ensure that:

- i. Empty cleaning agent containers are appropriately cleaned, treated and labeled before use;
- ii. Empty cleaning agent containers are labeled, isolated and securely stored while awaiting collection; and
- iii. Unused and obsolete cleaning agents are stored under secure conditions while waiting authorized disposal by an approved vendor.

13.2.11 Implementation Guidance

What does it mean?

Cleaning and sanitation methods will vary depending on the nature of the operation and the risk. This element covers cleaning and sanitation protocols but specifies the correct use and type of cleaning detergents, sanitizers (also referred to as disinfectants) and the requirement for post-clean inspections.

It is important to stress that, irrespective of the type of production and risk, all packaging manufacturing facilities require an appropriate documented and implemented cleaning program. The program must be verified to ensure its effectiveness.

What do I have to do?

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A written cleaning program shall be in place and fully implemented that includes provisions for effective cleaning of equipment, facilities, utensils, amenities and external areas. The cleaning program shall identify the what, how, when and who for every item of equipment and part of the site. Responsibilities shall be identified, including responsibility for the visual or test inspection, and the verification of cleaning methods.

For small items of equipment such as tools and knives, a wash area is recommended with sufficient hot and cold running water, a suitable detergent and sanitizer for cleaning and when necessary, suitable racks for draining/drying equipment, utensils, and protective clothing. These areas shall be identified and constructed so they do not present a hazard to other manufacturing operations. Protective clothing racks provide temporary storage for gloves, aprons and other items when staff needs to leave the manufacturing area for meals or other short breaks. Used disposable protective clothing must be immediately disposed of in an appropriate manner. Non-disposable protective clothing shall be cleaned according to the written procedures.

The cleaning and sanitation protocol shall include the following detail:

- List all the areas and equipment to be cleaned;
- The frequency for cleaning and sanitizing different areas of the premises and all associated equipment including pre-operative cleaning and cleaning between breaks;
- A full description of the cleaning and sanitation procedures for each piece of equipment or area of the operation. This should include:
 - Physically remove solid particles by sweeping or wiping;
 - Apply a suitable detergent in the correct concentration to remove grease and other residues;
 - Rinse off residues and detergent;
 - Apply a suitable sanitizer in the correct concentration to reduce or eliminate microbiological contaminants if required;
 - Rinse to remove residual sanitizer, if indicated on product label;
 - Dry, as indicated, in a manner that will prevent recontamination.
- Ensure no cross-contamination with other product contact surfaces occurs;
- Ensure operators involved in cleaning, including contract cleaners, are fully trained in cleaning and sanitation procedures;
- Chemicals must be approved for use by the appropriate authority; maintain on file Safety Data Sheets (SDS) for each chemical used. Describe the chemicals used, their dilution rate and method of application;
- Chemical cleaners and sanitizers must be used and stored in an approved manner;
- Evaluation of cleaning. Monitor the effectiveness of cleaning and keep records of all inspections implemented to verify the effectiveness of the cleaning program. This can include visual inspection after sanitation activity or prior to start-up; The results of the Environmental Monitoring (2.4.8) can also be used to validate the effectiveness of the cleaning and sanitation as well as the frequency between intervals.
- Maintain an inventory of chemicals purchased and used;
- Outline requirements for the disposal of unused compounds and empty containers in accordance with regulatory requirements.

Chemicals and sanitizers, used at the site, that are mixed to proper concentration levels shall be mixed according to the manufacture directions. Mixed chemical solutions shall be stored in appropriate containers that are labelled and clearly identified. Verification of the mixed concentration shall be verified and results shall be recorded.

To verify the site is operating in a sanitary manner throughout the shift, sanitation shall be monitored and documented regularly by the shift supervisor or a designated employee.

Any corrective actions taken when inspection reveals a problem must be recorded.

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13.2.11 Auditing Guidance

Cleaning and sanitation procedures and schedule shall be reviewed at the initial desk audit. Subsequent compliance to this requirement and the site cleaning and sanitation procedures shall be reviewed at each site audit through observation, review of records, and interviews with operational staff and cleaning contractors if applicable. Evidence may include:

- The site has an effective and appropriate cleaning program in place;
- All critical equipment and areas of the site are covered in the cleaning program;
- Cleaning methods include what is to be cleaned, how it is to be cleaned, frequency of cleaning and responsibility for cleaning;
- The cleaning program includes measures for verification of the effectiveness of sanitation;
- The cleaning of manufacturing equipment is effective;
- The cleaning of utensils and protective clothing is effective;
- The cleaning of buildings, surrounds, and amenities is effective;
- Cleaning of utensils is carried out in an area separate from processing operations;
- Racks and areas for storing cleaned utensils are provided and appropriate;
- Pre-operational inspections are completed to ensure cleanliness;
- All critical areas of the site are included in pre-operational inspections;
- Personnel conducting pre-operational inspections are trained and qualified;
- A sanitation verification schedule is available;
- Methods are established for verification of sanitation;
- Responsibility is established for verification of sanitation;
- An inventory of purchased chemicals is available and is current;
- Detergents and sanitizers meet local regulatory requirements;
- SDS sheets are available for all cleaning chemicals purchased;
- Personnel handling cleaning chemicals are properly trained;
- Cleaning chemicals are disposed of as per regulatory requirements;
- Empty cleaning chemical containers are labeled and securely stored;
- Records of cleaning and sanitation activities are maintained and complete;
- Mixed concentration levels are to be mixed to manufacturer instructions, tested for verification and recorded.
- Records of hygiene inspections are maintained and complete.

13.3 Personnel Hygiene and Welfare

13.3.1 Personnel

What the SQF Code says

13.3.1.1 Personnel who are known to have or who are known to be carriers of infectious diseases that present a health risk to others through the manufacturing or storage processes shall not engage in the manufacture of food contact packaging, or enter storage areas where food contact packaging is exposed.

13.3.1.2 The site shall have measures in place to prevent contact of materials, food packaging or food packaging contact surfaces from any bodily fluids from open wounds, coughing, sneezing, spitting, or any other means. In the event of an injury which causes spillage of bodily fluid, a properly trained employee shall ensure that all affected areas including handling and manufacturing areas have been adequately cleaned and that all affected materials have been quarantined and disposed of.

13.3.1.3 Personnel with exposed cuts, sores or lesions shall not be engaged in handling raw materials or finished food packaging. Minor cuts or abrasions on exposed parts of the body shall be covered with a colored bandage containing a metal strip or an alternative suitable waterproof and colored dressing.

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13.3.1.4 Smoking, chewing, eating, or spitting is not permitted in areas where product is produced, stored, or otherwise exposed. Drinking of water is permissible only under conditions that prevent contamination or other food safety risks from occurring. Drinking water containers in production and storage areas shall be stored in clear, covered containers, and in designated areas away from raw materials, food packaging or equipment.

13.3.1 Implementation Guidance

What does it mean?

In many jurisdictions, personnel requirements applicable to food or food related facilities are covered by food safety legislation. Where this applies, the legislative requirements must underpin the requirements of 13.3.1. This element covers the basic personal hygiene requirement for working in a food packaging manufacturing site.

What do I have to do?

Medical screening of staff and contractors must be undertaken to detect carriers of infectious diseases. Staff identified as carriers of infectious diseases are not to be permitted to handle materials, work in progress, or finished product.

Employees must be aware of risks to the products from the potential transmission of pathogens from ill employees. The site's employee hygiene plan will address both the prevention and control of product exposed to ill employees and bodily fluids. An example of a control program could be the removal of an employee from direct product contact to non-product contact activities when the employee reports potential illness or injury. Ideally, an employee will not be penalized for reporting illness to the site. This will be supported by introductory training with all employees on reporting illnesses and injury and a questionnaire on illnesses for visitors. Procedures and training will outline how to address exposure and contact of materials and product.

Staff with exposed cuts, sores or lesions are not permitted to handle products unless suitable protective coverings are applied. These coverings must be monitored regularly by responsible personnel to ensure they remain effective. Bandages are to be brightly colored to ensure they can be easily seen. Dressings on hands and fingers are required to be covered with a suitable glove.

Smoking, eating, chewing and drinking are not permitted in manufacturing areas. A risk analysis for drinking water must be conducted and controls must be developed by the site to minimize the risk to the safety of the product if it is provided in a manufacturing area. If water is consumed in the manufacturing area, it is recommended that employees wash hands before returning to their station, or, at a minimum, hand sanitizer needs to be applied prior to returning to their work station, if permitted by regulation.

Where smoking is allowed, including electronic cigarettes, it should only be permitted in designated areas which shall be separate from production and storage areas and as per local regulations. Smoker's waste (e.g. butts) shall have appropriate containers for collection and be removed as per waste handling procedures (ref 13.8.1).

13.3.1 Auditing Guidance

Medical screening and personal hygiene policies and procedures shall be reviewed at the initial desk audit, and the effective implementation checked at each site audit through observation, review of records and interviews with staff. SQF auditors will question employees on hygiene practices to ensure they are understood and applied. Evidence may include:

- Medical screening and personal hygiene program, policies and procedures are in place;
- Medical screening and personal hygiene program, policies and procedures are effectively implemented;
- The policies and procedures for the prevention and control of bodily fluids are in place;
- The policies and procedures for the prevention and control of bodily fluids are effectively implemented;
- Employees notify the business of illness and injury according to policy;
- Personnel who are engaged in packaging handling and exhibit signs of illness are redeployed to low risk tasks;
- Personnel who are known to have been ill with an infectious illness are not involved in

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- product handling;
- Personnel with sores or cuts on hands are redeployed to low risk tasks or have cuts suitably bandaged and gloved;
- Bandages provided to staff are brightly covered;
- There is no smoking, eating or drinking in packaging manufacture and handling areas;
- Employee’s wash hands after returning to work from designated smoking areas; and
- Drinking water in production areas is in clear, covered containers, and stored in a designated area away from materials or equipment.

13.3.2 Hand Washing

What the SQF Code says

13.3.2.1 Hand wash basins shall be provided in appropriate areas.

13.3.2.2 Hand wash basins shall be constructed of stainless steel or similar non-corrosive material and as a minimum supplied with:

- i. A potable water supply at an appropriate temperature;
- ii. Liquid soap contained within a fixed dispenser;
- iii. Paper towels or effective hand dryer; and
- iv. A means of containing used paper towels.

13.3.2.3 A sign instructing people to wash their hands, and in appropriate languages, shall be provided in a prominent position.

13.3.2.4 Personnel shall have clean hands and hands shall be washed by all personnel, including staff, contractors and visitors:

- i. On entering production areas;
- ii. After each visit to a toilet;
- iii. After using a handkerchief;
- iv. After smoking, eating or drinking; and
- v. After handling waste or chemicals.

13.3.2.5 When gloves are used, personnel shall maintain the hand washing practices outlined above.

13.3.2 Implementation Guidance

What does it mean?

In all food packaging manufacturing facilities, employees, contractors and visitors must have clean hands upon entering packaging manufacture and handling areas; after each visit to a toilet; after using a handkerchief; after smoking, eating or drinking; and after handling wash down hoses, dropped product or contaminated material. Hand wash stations must therefore be correctly equipped and available at convenient locations for use. **What do I have to do?**

Hand wash basins must be provided in close proximity to pedestrian entry points at each area of the site, with instructions for all staff, contractors and visitors to wash hands immediately before entering the manufacturing area. Additional hand basins are required where hands could become contaminated prior to working with product.

Potable water at a suitable temperature, liquid soap, single-use paper towels and a means of disposing of used paper towels need to be provided at each station. Hand washing soaps and scrubs should be evaluated to be free of allergens (see also 2.8.1).

Where alternative methods of hand-drying are preferred (e.g., high-speed air dryers) they must be justified and their effectiveness validated (refer to 2.4.2.2 or 2.5.1.1).

Hand-wash basins are to be constructed of stainless steel or similar non-corrodible material. Hand-wash basins constructed of porcelain or similar materials must be located at a distance from packaging manufacture and handling areas.

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13.3.2 Auditing Guidance

The location and construction of hand-wash stations and their use by staff, contractors and visitors shall be reviewed at each site audit. Evidence may include:

- Hand wash basins are available for staff, contractors, and visitors;
- Hand wash basins are located at personnel access points and areas where hands could become contaminated;
- Hand wash basins are constructed of an appropriate material;
- Hand wash basins have potable water supplied at appropriate temperatures;
- There is liquid soap available at hand wash stations;
- There are paper towels available at hand wash stations;
- There are containers for used paper towels at hand wash stations;
- There is signage near hand wash stations instructing people to wash their hands;
- Personnel in packaging manufacture and handling areas have clean hands;
- Personnel wash their hands on entering manufacturing areas;
- Personnel wash their hands on leaving toilet areas;
- Personnel wash their hands on leaving the lunch room;
- Personnel wash their hands after handling products, hoses or waste;
- Personnel wash their hands after eating, drinking or smoking;
- Personnel who use gloves also follow hand washing requirements.

13.3.3 Clothing

What the SQF Code says

13.3.3.1 The site shall undertake a risk analysis to ensure that the clothing and hair policy protects food contact packaging from unintentional contamination.

13.3.3.2 Clothing worn by staff engaged in handling food contact packaging shall be maintained, stored, laundered and worn so as not to present a contamination risk to products.

13.3.3.3 Clothing and shoes shall be clean at the commencement of each shift and maintained in a serviceable condition and changed where they present a product contamination risk.

13.3.3.4 Gloves used when contacting finished packaging material shall be clean and maintained and replaced when needed.

13.3.3 Implementation Guidance

What does it mean?

Uniforms, including footwear and hair coverings that are provided to employees in food packaging manufacturing sites, are primarily for the protection of materials, work-in-progress (WIP), finished product and product contact surfaces. However, buttons, snaps, pockets and the like can pose risk if the clothing item is not properly vetted, and head, face and body hair pose both potential biological and physical hazards that must be analyzed. Clothing must therefore be designed to prevent contamination and maintained in a clean and serviceable condition. A risk analysis will identify which items are appropriate for the personnel, product and process.

What do I have to do?

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Employees and visitors must wear clean clothing, footwear, and hair covering, if identified as a risk, while in the manufacturing area. The site must conduct a risk analysis to identify clothing needs and the risk posed by the clothing choices. Employees and visitors with excessively soiled clothing are not to handle products or materials. Employees can wear uniforms off site provided they are properly cleaned at the beginning of their work operation.

Clothing includes outer garments such as work clothes, overalls, boots, shoe coverings, head coverings, hair nets, smocks, frocks, beard snoods and coats. When required, gloves and aprons shall be kept in an intact and sanitary condition when used. When not in use, gloves and aprons shall be stored in a designated area (e.g., such as a rack or in sealed containers within lockers), not on products or equipment.

Disposable gloves shall be removed before each break, changed upon re-entry into the manufacturing area and when damaged. Employees must comply with hand washing practices even when gloves are used.

Any disposable clothing must be changed between breaks, upon entry into manufacturing areas and when damaged. This includes aprons, frocks, smocks, boots, gloves, etc. When clothing is to be reused, it must be properly cleaned and stored on racks or hangers. It cannot be stored on boxes, product or packaging materials. Hairnets and beard snoods are to be worn by employees working on the manufacturing line or who work around exposed product where required as per the risk assessment or customer requirements.

Designated storage areas used for storage of work clothing and personal items shall be maintained to prevent contamination to the items stored.

13.3.3 Auditing Guidance

Company choices for clothing, including uniforms, gloves, hairnets, snoods and footwear shall be based on a risk analysis and reviewed at the initial desk audit. Clothing worn by staff, contractors and visitors (where appropriate) shall be reviewed at each site audit through observation and interview. Evidence may include:

- A risk analysis has been conducted to determine clothing needs and choices;
- Company policies on clothing including uniforms, gloves, hairnets, snoods and footwear are in place and are appropriate for the type of operation;
- Company clothing policies are implemented by all staff;
- Clothing provided to staff is appropriate and properly maintained;
- Clothing worn by staff is clean and changed when excessively soiled;
- Items such as hair nets, snoods and disposable gloves are available at accessible locations;
- Clothing requirements for contractors and visitors are followed;
- Disposable gloves and hairnets are correctly disposed of;
- Non-disposable gloves and/or aprons are properly cleaned between uses.

13.3.4 Jewelry and Personal Effects

What the SQF Code says

13.3.4.1 Jewelry and other loose objects shall not be worn or taken into a product handling or any area where packaging material is exposed.

13.3.4.2 The wearing of plain bands with no stones and medical alert bracelets that cannot be removed can be permitted, however the site will need to consider their customer requirements and the applicable food legislation.

13.3.4 Implementation Guidance

What does it mean?

Loose pieces of jewelry can fall into exposed food packaging products and cause a subsequent choking hazard in food products which make use of the packaging. Also, pathogenic bacteria can multiply in the warm, humid areas under watchbands, rings and bracelets.

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The application of the jewelry policy in food packaging manufacturing is therefore dependent on the risk to the product and exposure to the product.

What do I have to do?

Jewelry and other loose objects, including watches, worn or carried, must comply with local regulatory authority and proper employee hygiene practices. If such hand jewelry cannot be removed, it may be covered with material which can be maintained intact, in a clean and sanitary condition and which effectively protects against the contamination by these objects to the product, materials or product contact surfaces.

Personal hygiene should be maintained by employees and includes not wearing or using fragrances as it may transfer to the material, equipment and work environment used to produce food packaging.

Personnel engaged in any packaging manufacture and storage operations should not be permitted to wear false fingernails, false eyelashes, eyelash extensions, long nails or fingernail polish.

Facilities can adjust their good employee hygiene practices based on customer requirements, risk to their product, product exposure and manufacturing conditions. Compliance to all personal hygiene requirements are verified on a routine basis.

13.3.4 Auditing Guidance

As with clothing, company policies on jewelry shall be reviewed at the initial desk audit, and the implementation of that policy reviewed at each site audit through observation and interview.

Evidence may include:

- The jewelry and personal effects policy is appropriate to the risk, product exposure and manufacturing conditions;
- The jewelry and personal effects policy is effectively implemented for staff, contractors and visitors.

13.3.5 Visitors

What the SQF Code says

13.3.5.1 All visitors, including management and maintenance staff, shall wear suitable clothing and footwear when entering any manufacturing or storage areas.

13.3.5.2 Visitors shall enter and exit manufacturing or storage areas through the proper staff entrance points and comply with all personnel practice requirements.

13.3.5.3 All visitors shall be trained in the appropriate site food packaging safety and hygiene procedures before entering into any manufacturing or handling areas or shall be escorted at all times in manufacturing and storage areas.

13.3.5 Implementation Guidance

What does it mean?

A visitor is considered a non-employee of the company or site. Examples of visitors would be vendors, service providers, contractors, truck drivers, tours and guests. Some sites may define visitors to include anyone who does not work in the site, thus, corporate or sister plant personnel could be considered visitors.

Visitors pose the same risk to product safety as site staff and in some cases a greater risk because they may not understand the operation or food hygiene requirements.

What do I have to do?

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<p>The requirements for visitors in packaging manufacturing facilities is dependent on the risk to the product, exposure to the product and the proximity of visitors to the process. In areas where product is exposed, visitors must follow exactly the same provisions as staff.</p> <p>The site shall have specific good hygiene practices for visitors, contractors and tours; have a means to communicate those expectations to visitors, contractors and tours; and monitor visitors, contractors and tours to ensure all visitors are in compliance with the company's good hygiene practices. All visitors must be suitably trained in hygiene policies (see 13.3.1 – 13.3.4) prior to entering material storage areas and packaging manufacture and handling areas. If this is not possible or feasible, for example for short-term visits, visitors must be escorted while in those areas. All visitors are required to wear clean clothing and foot wear, and must remove jewelry and other loose objects, including watches that may fall into equipment.</p> <p>Visitors shall enter and exit protected areas through designated staff entrance points and must comply with all hand washing and personal requirements. Visitors must not be permitted to handle any product or equipment unless they are a contracted service provider and it is in the scope of their work.</p> <p>Visitors shall sign in the visitor log, show proper identification, state the reason for the visit, and state whom they are to meet (see also 2.7.1). and shall be accompanied at all times by a site employee. For their personal safety, as well as the security of the product and process, they cannot be untrained or unsupervised.</p>
13.3.5 Auditing Guidance
<p>The site policy on visitors shall be reviewed at the initial desk audit and the implementation of that policy reviewed at each site audit through observation and interviews. As someone external to the site, the auditor will be able to partly ascertain compliance by their personal experience on entering the site. Evidence may include:</p> <ul style="list-style-type: none">• The visitor policy is appropriate to the risk, product exposure and manufacturing conditions and the type and number of visitors visiting the site;• The visitor policy is effectively implemented for contractors, and visitors.

13.3.6 Staff Amenities

What the SQF Code says

13.3.6.1 If provided, staff amenities supplied with appropriate lighting and ventilation shall be made available for the use of all persons engaged in the handling and storage of food contact packaging.

13.3.6 Implementation Guidance
<p>What does it mean?</p> <p>This is a header element, which leads to the further descriptions in 13.3.7 – 13.3.9 addressing change rooms, restrooms, and lunch rooms.</p> <p>What do I have to do?</p> <p>Provide adequate lunchroom and restroom facilities, as appropriate for the number of employees in the operation based on applicable legislation relevant to the commodity being processed.</p> <p>Provided amenities must have adequate lighting and ventilation.</p>
13.3.6 Auditing Guidance
<p>This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:</p> <ul style="list-style-type: none">• Amenities are provided commensurate with the type of operation and the number of employees;

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- Amenities are available for all employees who handle product;
- Staff amenities have adequate lighting;
- Staff amenities have adequate ventilation.

13.3.7 Change Rooms

What the SQF Code says

13.3.7.1 Where applicable, facilities shall be provided to enable staff to change into and out of protective clothing as required.

13.3.7.2 Where applicable, provision shall be made for staff to store their street clothing and personal items separate from packaging handling or storage areas.

13.3.7 Implementation Guidance

What does it mean?

Provide a designated area (i.e., locker room) for employee and visitor garments and personal items.

What do I have to do?

Change rooms (i.e., locker rooms), where applicable, must be provided with lockers for staff and visitors when they are required to change from street clothing to protective clothing to enter the food packaging facility. The areas shall be designed so materials and personal items cannot be stored on top of the lockers. The area around and under lockers if not fully sealed, must be able to be easily cleaned. It is generally recommended that lockers be fitted flush with the ceiling, placed on stands raised off the floor to allow for ease of cleaning and be properly maintained so they are not a source of cross-contamination with other objects or clothing being transferred into the production area

13.3.7 Auditing Guidance

This element will be audited as part of each site audit through observation and interview with operational staff. Evidence may include:

- Change rooms are provided commensurate with the type of operation and the number of employees;
- Change rooms are designed to avoid storage on top of lockers, and ease of cleaning;
- There are facilities for staff to secure personal items.

13.3.8 Sanitary Facilities

What the SQF Code says

13.3.8.1 Toilet rooms shall be:

- i. Designed and constructed so that they are accessible to staff and separate from any food packaging handling or storage operations;
- ii. Accessed from the manufacturing area via an airlock vented to the exterior or through an adjoining room;
- iii. Sufficient in number for the maximum number of staff;
- iv. Constructed so that they can be easily cleaned and maintained; and
- v. Kept clean and tidy.

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13.3.8.2 Sanitary drainage shall not be connected to any other drains within the premises and shall be directed to a septic tank or a sewerage system in accordance with regulations. Procedures shall be documented and implemented to properly manage sewage back-ups in order to minimize the potential for contamination.

13.3.8.3 Hand wash basins shall be provided immediately outside or inside the toilet room and designed as outlined in 13.3.2.2.

13.3.8 Implementation Guidance

What does it mean?

Sufficient restrooms/toilets are required to accommodate the number of staff. Their location and design must be such that they do not cause a contamination risk to product, product contact surfaces, areas where product is exposed or to product handlers.

What do I have to do?

Restroom/toilet facilities must be located so that they do not open directly into the manufacturing area. In existing facilities where they are in close proximity to areas where product is exposed, an airlock vented to the exterior must be maintained (negative pressure). Staff shall enter toilet rooms from manufacturing areas through either an intervening change room or air lock which is ventilated to external air.

Where exhaust fans are fitted, they must be exhausted to the outside and not into a manufacturing area. The light and exhaust fan can be inter-wired to create negative pressure as an option or the light and exhaust fan can be left on continuously.

To eliminate the risk of air flow from restrooms into the manufacturing area, exhaust fan off-switches may be on timer delay. The light and exhaust fan may be on a single switch located on the outside of the restroom.

Separate toilet rooms shall be provided for each gender and are typically located adjacent to and separate from the change room. The number of toilet cubicles to be provided depends on the number of staff or is based on applicable legislation. Sites must be aware of local legislation, but as a guide:

Persons of the same gender	No. of bowls
1-15	1
16-35	2
36-55	3
56-80	4
>80 for each additional 30 persons	1

In male toilets, urinals can substitute for up to one-third of the total number of bowls.

Employee restrooms shall be properly equipped with hand wash facilities (refer 11.3.2). Hands-free taps are preferred as they improve sanitary conditions.

Signage may consist solely of icons (such as those published by the International Association for Food Protection) to accomplish these requirements, with exception of restroom signage, where other regulatory requirements must be applied.

Sanitary drainage must be kept separate from drainage from manufacturing areas.

13.3.8 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with

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operational staff. Evidence may include:

- There are sufficient toilets available for each gender and the number of employees;
- Toilets do not open directly into manufacturing areas;
- Toilets can be easily cleaned;
- Toilets are clean and tidy;
- Sufficient hand wash basins are available near the toilets;
- Sanitary drainage is separated from processing site drains.

13.3.9 Lunch Rooms

What the SQF Code says

13.3.9.1 Separate lunch room facilities shall be provided away from packaging manufacturing, handling or storage areas. Lunch rooms shall be kept clean and tidy and free from waste materials and pests.

13.3.9.2 Signage in appropriate languages instructing people to wash their hands before returning to packaging manufacturing and storage areas shall be provided in a prominent position in lunch rooms and at lunch room exits.

13.3.9 Implementation Guidance

What does it mean?

Employees, contractors and visitors are not permitted to eat or drink in packaging manufacture and handling areas (refer to 13.3.1.4). Designated lunch rooms must therefore be available for staff to take breaks and eat meals. These areas must be physically separated from packaging manufacture and handling areas.

What do I have to do?

The site may provide additional outdoor lunchroom facilities (e.g., picnic tables) where they do not pose a dust or pest hazard to the manufacturing area of the site. Covered facilities and sealed paths are one way to address these hazards. Where hazards presented by such facilities are minimal, the site may employ alternative controls such as routine cleaning of tables and steps to minimize dust on non-sealed paths.

Each site shall be equipped with a ventilated and well-lit lunch/break room for employees. The room must be equipped with a sink serviced with hot and cold potable water, a refrigerator and a microwave. The area must be kept clean. Where shift or physical logistics of the working environment prevents break rooms from being properly equipped the site must provide alternative controls, such as hand sanitizer and wipes, to ensure hands and clothing do not pose a risk to product contamination.

The location of the lunch room shall be considered to not pose a risk to contamination of the production area. Consideration must be taken if the lunch room is located near the production area so that any employee transferring their food to the lunch room will not pose a risk (E.g. designated employee walkways).

13.3.9 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Separate lunch facilities are provided;
- Lunch room facilities are adequate for the number of staff;
- Lunch facilities are separated from packaging manufacture and handling and product storage areas;
- Employee path transferring food to the lunch room does not pose a risk to production areas;

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- Lunch room facilities are properly ventilated;
- Lunch room facilities are well lit;
- Lunch room facilities include a sink with hot and cold running water;
- Lunch room facilities are clean and tidy;
- Proper heating or cooling facilities are provided in lunch facilities;
- Hand wash signage is available at the exit of the lunch facilities;
- Hand wash signage at the exit of lunch facilities is in appropriate languages.

13.4 Personnel Processing Practices

13.4.1 Staff Engaged in Manufacture, Handling and Storage of Food Contact Packaging

What the SQF Code says

13.4.1.1 All personnel engaged in any packaging manufacture and storage operations shall comply with the following practices:

- i. Personnel entry to production areas shall be through designated access doors only;
- ii. All doors are to be kept closed. Doors shall not be left open for extended periods when access for waste removal or receiving of materials is required;
- iii. Raw materials, packaging and finished product shall be maintained appropriately and off the floor;
- iv. Waste shall be contained in the bins identified for this purpose and removed from the manufacturing area on a regular basis and not left to accumulate.

13.4.1.2 The manufacturing process shall be controlled such that the packaging material produced is food safe and free from contamination. Procedures shall be in place to prevent cross contamination of food contact packaging from raw materials, recycled materials, cleaning agents, or chemicals.

13.4.1.3 All personnel engaged in the manufacture, storage, transport and handling of finished product shall ensure that products and materials are handled and stored in such a way as to prevent damage of contamination

13.4.1 Implementation Guidance

What does it mean?

Proper product handling practices combined with sanitary conditions result in:

- Reduced risk of product contamination; and
- Fewer product returns or complaints.

While management has overall responsibility for ensuring that sanitary manufacturing practices are adopted, and for establishing hygiene procedures. Line operators and supervisors have a responsibility for ensuring these procedures are carried out properly and effectively.

What do I have to do?

Management must develop a list of good hygiene practices of “dos and don’ts.” This list must be consistent with sections 13.3 and 13.4 of the SQF Code. This will be part of the documented procedures and work instructions. All staff, contractors, and visitors (where applicable) must be made aware of these requirements before entering the site.

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<p>The site shall have designated access points for personnel to enter and exit. Access points are defined as dock doors, pedestrian doors, office doors and any door that enters into the site from the outside. Doors that are opened for ventilation must be screened. All manufacturing areas must have areas for employees to be able to wash their hands upon entry into packaging manufacture and handling areas.</p> <p>Appropriate containers for waste storage are containers that are considered easily cleanable, properly labelled, not absorbable and designed for the purpose. No packaging container is to be used for the storage of waste or scrap. Waste containers are to be clearly labelled or designated as waste in languages relevant to the employee workforce.</p>
13.4.1 Auditing Guidance
<p>Good hygiene practices will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation and interviews with operating personnel.</p> <p>Evidence may include:</p> <ul style="list-style-type: none">• Good hygiene practices have been developed;• Staff are aware of the company’s good hygiene practices;• Staff adhere to the company’s good hygiene practices;• All exterior doors have protective controls in place;• Hand wash stations are available at designated access points;• Employees, contractors and visitors wash their hands at designated access points;• Employees, contractors and visitors follow hygiene protocols;• Employees are wearing hairnets in the designated areas;• Products or materials are stored in appropriate containers and not on the floor;• Waste containers are properly identified; and• Waste is not left to accumulate in waste containers and is removed at appropriate intervals,

13.5 Water and Air Supply

13.5.1 Water Supply

What the SQF Code says

13.5.1.1 Adequate supplies of clean water shall be provided for use during manufacturing operations, and for cleaning the premises and equipment.

13.5.1.2 Supplies of hot and cold water shall be provided as required to enable the effective cleaning of the premises and equipment.

13.5.1.3 The delivery of water within the premises shall ensure potable water is not contaminated.

13.5.1.4 The use of non-potable water shall be controlled such that:

- i. There is no cross contamination between potable and non-potable water lines;
- ii. Non-potable water piping and outlets are clearly identified;
- iii. Hoses, taps, or other similar sources of possible contamination shall comply with local, national or international regulatory requirements to prevent back flow or back siphonage.

13.5.1 Implementation Guidance
<p>What does it mean?</p> <p>Potable water supply at the correct temperature and pressure prescribed by applicable legislation must be of sufficient capacity for all scheduled production needs and meet cleaning and sanitation requirements (refer to 13.2.11).</p> <p>What do I have to do?</p>

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Potable water, or drinking water, is water that is safe enough to be consumed by humans or used with low risk of harm. In most developed countries, sufficient quantities of potable water are delivered to packaging manufacturing facilities for operational purposes. In some countries however, and some regions in developed countries, the potability of municipal water cannot be relied on. The site must ensure the availability of sufficient supplies of water for personnel hygiene and cleaning purposes.

13.5.1 Auditing Guidance

This element will be audited as part of each site audit through observation, review of records and interviews with operational staff. Evidence may include:

- Water used in manufacturing is from a potable source;
- Potable water availability is adequate for manufacturing needs;
- Potable water availability is adequate to meet cleaning requirements;
- Hot water is available for cleaning purposes.

13.5.2 Water Quality

What the SQF Code says

13.5.2.1 Water shall comply with local, national or internationally recognized potable water microbiological and quality standards as required when used for:

- i. The manufacture of food contact packaging;
- ii. Cleaning product contact surfaces;
- iii. Hand washing; and
- iv. The manufacture of steam that is in contact with food packaging material.

13.5.2 Implementation Guidance

What does it mean?

Even though the water supply may come from the town or regional water supply in which the water is treated, safety tested and maintained by the local authority, it is required that food packaging manufacturers ensure their water at point of use complies with regulations.

Any water that is used in the process that could come in contact with the product or for personnel hygiene purposes must be verified to be in compliance with local and national standards. In the US and Australia for example, the potability standard for drinking water is <1 coliform / 100 mL water and membrane filtration is the preferred method. However, standards also apply for *Salmonella* spp, *Shigella* spp, enterovirulent *E.coli*, *Vibrio cholera*, *Yersinia enterocolitica*, *Campylobacter jejuni*, and protozoa.

What do I have to do?

This element identifies the areas where potable water must be used, e.g., cleaning and hand washing.

The site must be aware of the national and/or international potable water standards and any microbiological or chemical water standards imposed by customers. Monitoring and/or analysis can be conducted to ensure water continues to meet the required standard.

The monitoring may involve one or a number of the following:

- Regular testing of water (e.g., pH, turbidity);
- Checking filtration apparatus and changing it as required (refer to supplier specifications);
- Regular cleaning of water holding tanks and reservoirs;

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<p>The rate at which water is monitored or tested should, ideally, be based on risk, owing to the potential for seasonal variations in the supply, but at minimum, water quality should be monitored and assessed for compliance at least annually. This should include for potability and any additional quality or safety attribute. Utilize recognized guidance or hire a suitably qualified external resource to collect samples. When utilizing an outside laboratory, seeking a laboratory that is properly accredited to complete the desired analysis is required. The water must be retested any time the water source is changed or when equipment is added to treat or convey water within the site’s water system.</p> <p>Any treatment of water on-site, either prior to usage or as a treatment of waste water, the treatment needs to have applicable analysis verifying the efficiency of the treatment.</p>
13.5.2 Auditing Guidance
<p>Water testing procedures will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:</p> <ul style="list-style-type: none">• There is a documented water testing procedure in place, including frequency and test method;• Water is microbiologically tested to verify cleanliness of the supply and effectiveness of treatment methods;• Appropriate standards are used to collect and analyze water;• Where external laboratories are used, the laboratories are accredited to offer water testing services.

13.5.3 Air Quality

What the SQF Code says

13.5.3.1 Where compressed air comes into contact with food packaging or surfaces which contact the food packaging, the following requirements shall be met.

- i. Air is filtered using an appropriate filter capable of removing dust, oil, moisture and microorganisms to avoid cross contamination to the packaging material;
- ii. A system is in place to monitor the purity of filtered air.

13.5.3.2 Compressed air systems used in the manufacturing process shall be maintained and regularly monitored for purity and completed annually, at minimum.

13.5.3 Implementation Guidance
<p>What does it mean?</p> <p>This applies to compressed air that comes into contact with food packaging product or surfaces which contact the food packaging. It does not apply to air that does not come into contact with food packaging or surfaces which contact food packaging.</p> <p>Purity means absence of contaminants that could cause a food safety hazard. Pure air means the air is free of risk for contamination of the products. Essentially, the air must not contribute any contamination to the product.</p> <p>What do I have to do?</p> <p>Compressed air can be a source of chemical and microbiological contamination. Potential contaminants can include particulates, including dirt (microorganisms, atmospheric dirt and solid particulates, rust and pipe scales), water (water vapor, condensed liquid water and water aerosols) and oil (oil vapor, liquid oil and oil aerosols).</p> <p>Sites must verify and validate that the compressed air used is appropriate and does not serve as a source of contamination. When compressed air comes in contact with exposed product or direct product contact surfaces, the air compressor must use food grade oil.</p>

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Preventive maintenance programs need to ensure that an appropriate filtration program is in place at the point of use and the filters are cleaned or changed at a frequency appropriate to the product and process or following any maintenance to air supply source or equipment. Any maintenance must be done in a hygienic manner.

Nozzles and air hoses are to be in good condition, properly repaired and maintained in a hygienic state (e.g., cleaned and sanitized). Hoses and nozzles are to be kept off the ground.

It is generally advisable to locate the filtration as close as practically possible (near the “point of use,” or the point where air contacts the product), so as to not have long lengths of piping/tubing between the microbial removal filter and the air/food contact point.

The site may consider the following controls for particulates

- i. Intake filters to remove atmospheric dirt and solid particulates.
- ii. An effective PM program should be in place to maintain the integrity of the filter.
- iii. Water, including vapor, liquid, condensed. A dryer in the compressed air system provides effective control. An effective PM program should be in place.
- iv. Oil, including vapor, liquid and aerosols. The presence of coalescing filters in the compressed air system effectively removes contamination. An effective PM program should be in place to maintain the integrity of the filter.

13.5.3 Auditing Guidance

Air quality program will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- The condition of air compressors and compressed air used to transport product, or otherwise to come into contact with exposed product and product contact surfaces;
- Filters are checked or changed at a frequency based on the air quality program;
- Maintenance staff has the data specification sheet for the filter housing;
- Follow up with preventative maintenance and SSOPs;
- Performance characteristics of the filter in place must match the risks identified in the site’s assessment.
- Compressed air that is in contact with food packaging is checked for purity using methods and at a frequency based on the air quality program and test procedures.

13.6 Storage and Transport

13.6.1 Storage and Handling of Materials, Food Packaging, and Equipment

What the SQF Code says

13.6.1.1 The site shall document and implement an effective storage plan in place that allows for the safe, hygienic storage of raw materials, food packaging, rework, equipment, and chemicals.

13.6.1.2 The responsibility and methods for ensuring effective stock rotation principles are applied shall be documented and implemented. Procedures are in place to ensure that all raw materials, work-in-progress, rework, and finished food packaging are utilized within their designated shelf-life, where applicable

13.6.1.3 Equipment storage rooms shall be designed and constructed to allow for the hygienic and efficient storage of equipment.

13.6.1.4 Where goods described in 13.6.2 and 13.6.3 are held under temporary or overflow conditions that are not designed for the safe storage of goods, a risk analysis shall be undertaken to ensure there is no risk to the integrity of those goods or contamination or adverse effect on food packaging safety and quality.

13.6.1 Implementation Guidance

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What does it mean?

This element addresses how materials, work in progress, rework, finished product, and food packaging do not get lost, damaged or contaminated in the process and, along with stored equipment and chemicals, are safely identified, utilized, rotated stored to maintain the safety, and integrity of the item.

What do I have to do?

The control of stock is not necessarily as simple as “first in, first out” (FIFO). The program must be designed to manage product safety and codes based on risk, customer specifications, conditions of the product, storage locations and inventory management.

The site storage plan should include a requirement that materials, food packaging, rework, equipment and chemicals are adequately stored far enough from walls and ceilings so that cleaning, inspection and pest prevention activities can be completed. Additionally, plans shall also indicate that different materials shall not be stored on the same pallet unless they are physically segregated and that finished products are not stored outside.

Materials used in the construction of storage rooms must comply with 13.2.1.1 and light fittings in storage areas must comply with 13.2.4.2.

Equipment storage rooms may be adjacent to equipment cleaning areas but kept separate to ensure there is no commingling of dirty and cleaned tools, utensils and equipment.

Racks are to be provided to ensure tools and equipment are not stored on the floor.

Where temporary or overflow storage is used, a risk analysis must be undertaken to ensure the stored product is not at risk or pose a risk to products, processes or personnel. The risk analysis must be documented and be available every time overflow storage is applied.

In particular:

- Materials and food packaging must be held in a dry, clean area that is free from pests;
- Chemicals must be stored in a safe secure area that complies with relevant regulations and does not pose a risk to personnel or other products.

13.6.1 Auditing Guidance

The storage plan shall be reviewed initially at the desk audit and compliance to this requirement by observation, interview and review of records at each site audit. Evidence may include:

- Storage plan is documented, implemented and effective;
 - Storage areas are included in the master cleaning schedule and internal audits/inspections;
- Review of stock rotation procedure;
- Review of stock records;
- Understanding of personnel responsible for inventory management;
- Visual confirmation of material, work in progress, and finished food packaging stock in storage;
- There is a dedicated storage area for clean tools, utensils and equipment;
- The equipment storage area allows access for cleaning;
- The equipment storage area protects equipment during storage;
- Alternative storage is being used;
- Risk analysis has been conducted for alternate storage;
- Materials or products are not being stored continuously in temporary storage;

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- There is no risk of product contamination from the use of temporary storage;
- Records validate the safe alternate or temporary storage control measures.

13.6.2 Storage of Food Packaging and Materials

What the SQF Code says

13.6.2.1 Rooms used for the storage of raw materials, finished food packaging and other dry goods shall be constructed to protect the product from contamination and deterioration.

13.6.2.2 Equipment used for the storage of food packaging shall be constructed of impervious materials and designed and located to prevent accumulation of debris and enable cleaning beneath and behind the equipment.

13.6.2.3 Vehicles that transport product shall be maintained so as not to present a food safety hazard.

13.6.2 Implementation Guidance

What does it mean?

Rooms and vehicles where materials and food packaging are stored or transported must be clean, dry and accessible.

What do I have to do?

Materials and food packaging must be stored in designated storage areas which protect the materials from contamination and deterioration. These materials shall be stored only in dry areas of the manufacturing process when staged for use during manufacturing. Ensure that storage areas are adequately protected from the elements, rodents and other pests and cleaned as per the master cleaning schedule. Finished food packaging must be protected from dust and other contaminants while in storage. This can be accomplished by the use of plastic wrap or other means to protect the product.

Site might also need to be aware of the need to segregate packaging used for identity preserved products and in particular materials and products containing allergens (refer to 2.8.2). These materials may require separate, dedicated storage rooms.

Materials used in the construction of storage rooms must comply with 13.2.1.1 and light fittings in storage areas must comply with 13.2.4.2.

The racks provided for the storage of materials and food packaging shall be constructed of impervious materials and designed to be easy to clean. The site must limit the use of wooden racks for storage of materials to dry areas only. Stands and the lower shelves of stands should be at least 150 mm (6 inches), or as required by applicable regulation above floor level to facilitate proper cleaning.

Fork lifts, hand-forks and other vehicles used in storage areas must be safe to use, hydrocarbon emissions must be controlled and operated in a manner that does not cause damage to product and equipment.

13.6.2 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Product storage rooms are located away from or appropriately separated for manufacturing areas;
- Storage rooms are adequately designed to protect materials and food packaging;
- Food packaging racks are made of material that is easily cleanable;
- Food packaging racks allow access to floor/wall junction for cleaning;
- Vehicles used in the storage areas do not release hydrocarbon emissions or present a hazard to materials or food packaging.

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13.6.3 Use and Storage of Hazardous Chemicals and Toxic Substances

What the SQF Code says

13.6.3.1 Hazardous chemicals and toxic substances, including solvents and agents, with the potential for contamination of food packaging shall be stored and used so as not to present a hazard to staff, packaging, or areas in which the product is handled, stored or transported.

13.6.3.2 The use of hazardous chemicals and toxic substances, including solvents and agents, shall be used according to manufacture recommendations and Safety Data Sheets (SDS).

13.6.3 Implementation Guidance

What does it mean?

Cleaning chemicals, pesticides, agricultural chemicals, lubricants, oil, grease, boiler chemicals, etc. plus any other toxic substances must be stored in designated separately secure storage areas.

What do I have to do?

There must be clearly visible means of separation of these groups of chemicals or toxic substances. They must not be stored on the same shelf or above each other on the same rack. Pest management chemicals shall be stored separate from cleaning chemicals and separate from engineering chemicals. Bulk containers of hazardous chemicals or toxic substances must have sufficient spill-proof procedures that ensure that no cross-contamination can occur. There must be signage indicating this area is a hazardous chemical storage area.

Chemical delivery systems installed in manufacturing areas will be clearly labelled to identify their use and all chemical containers connected to these systems will remain connected while in use and identified through proper labels. Only personnel who have been properly trained in the use of the system will be authorized for access and use of the system.

Chemical storage areas must comply with local or national regulations, be designed to contain spillages, and be ventilated, secure and lockable. Only approved and authorized chemicals are to be stored. An inventory of stored chemicals must be available at all times.

Chemicals must be stored in their original containers or transferred to specifically designed bulk storage units that are correctly labelled.

Chemical products with strong fragrances that may be transferred to raw material, work in progress, finished goods, equipment or storage areas should be avoided to prevent odor contamination. Utensils, tools or equipment used for food packaging must not be stored in the same room as hazardous chemicals.

The site must ensure that Safety Data Sheets (SDS) are readily available and accessible to personnel handling or coming into contact with hazardous chemicals. The site must also ensure that personnel have been trained in the safe handling and use of all hazardous chemicals in use on site as required by legislation.

Please refer to 13.2.10.4 for pest control chemicals and 13.2.11.7 for cleaning chemicals.

13.6.3 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operators, cleaners and pest control personnel. Evidence may include:

- There is one or more designated storage rooms for storing of chemicals;
- Chemical storage rooms are correctly designed and constructed, and meet regulatory standards;
- Chemical storage rooms are ventilated, secure and lockable;
- There is a detailed inventory of stored chemicals;
- The inventory agrees with the actual stock in store;

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- Only authorized chemicals are stored;
- There is appropriate signage indicating the area as a hazardous storage area;
- The chemical storage areas are separate from manufacturing areas;
- There is spill control and spill kits available in the chemical storage rooms;
- There are no manufacturing tools, utensils or equipment stored with hazardous chemicals;
- Daily/shift supplies of chemicals are stored correctly;
- Materials and food packaging is not stored in an area used to store hazardous chemicals;
- Sanitizers and detergents are not stored with pesticides or other toxic chemicals
- Chemicals are stored in original containers;
- There are instructions on safe handling of chemicals available.

13.6.4 Loading, Transport and Unloading Practices

What the SQF Code says

13.6.4.1 The practices applied during loading, transport and unloading of raw materials and food contact food packaging materials shall be documented, implemented and designed to maintain appropriate storage conditions and product integrity. Finished food packaging shall be loaded, transported and unloaded under conditions suitable to prevent cross contamination.

13.6.4 Implementation Guidance

What does it mean?

The duty of assuring food safety of the site’s product continues from when ingredients and materials are first unloaded at the site through to when the finished product is placed into storage and loaded ready for distribution. Loading, unloading and distribution procedures must be documented and implemented.

What do I have to do?

Conditions for storage, loading and unloading will vary depending on the type and nature of the materials and products being handled. Documented procedures must cover each type (e.g., bulk, bagged, partially finished and finished) of product delivered into or out from the site. They shall include the practices, documentation and corrective actions taken during or as a result of inspections or observations.

The site shall ensure that unloading areas for bulk deliveries, if applicable, are clearly identified and designed to prevent product mixing.

Dunnage and product from customers must be inspected for food safety acceptability prior to unloading into the facility to identify if precautionary methods must be taken to prevent cross contamination during transport and storage

Some sites have their own transport, some sites use contract transport. Where contract services are used, the transport protocol will be referenced in the contract with the provider (refer to 2.3.3).

13.6.4 Auditing Guidance

Transport (i.e., loading, unloading and distribution) procedures will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Methods used to load and unload materials and products are documented;
- Methods used for the transportation of products are documented;

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- The documented methods adequately protect the product;
- The documented methods are effectively implemented.

13.6.5 Loading/Unloading

What the SQF Code says

13.6.5.1 Vehicles (e.g. trucks/vans/containers) used for transporting food packaging material shall be inspected prior to loading to ensure they are clean, in good repair, suitable for the purpose and free from odors or other conditions that may impact negatively on the food packaging.

13.6.5.2 Loading practices shall be designed to minimize unnecessary exposure of the food packaging to conditions detrimental to maintaining its integrity.

13.6.5 Implementation Guidance

What does it mean?
Loading practices shall be documented as per 13.6.4. They shall include conditions and inspections for outbound trucks and trailers.

What do I have to do?
Prior to loading all outbound trucks and trailers must have a visual inspection conducted for cleanliness, pest infestation and structural conditions and to verify that all trucks/trailers are free of offensive odors. All inspection findings are to be maintained in records.

During loading food packaging must be protected from damage and/or other conditions that might lead to contamination or effect the integrity of the product.

13.6.5 Auditing Guidance

This element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers Evidence may include:

- Pre-shipment reviews are conducted on transportation vehicles for cleanliness, maintenance, and suitability;
- The requirement for pre-shipment inspection is included in the transport protocol (refer to 13.6.4) and the transport contract (refer to 2.3.3);
- Loading and staging of product does not expose product to potential abuse or contamination.

13.7 Separation of Functions

13.7.1 Process Flow

What the SQF Code says

13.7.1.1 The process flow shall be designed to prevent cross contamination and organized so there is a continuous flow of product through the process.

13.7.1.2 The flow of personnel shall be managed such that the potential for contamination is minimized.

13.7.1 Implementation Guidance

What does it mean?

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<p>The layout of processes, storage, shipping and receiving must be designed to minimize the potential for contamination from materials, premises, other processes, other parts of the same process, vehicle (e.g., forklift) traffic and pedestrians (e.g., employees, contractors or visitors).</p> <p>What do I have to do?</p> <p>The layout of food packaging manufacturing processes must consider the risks of product contamination and be designed to minimize or eliminate those risks. The process flow shall ensure that the reception of raw materials, manufacturing of food packaging, storage of finished goods, and transfer for shipment has been designed to ensure continuity in production and prevent the risk for cross contamination.</p> <p>Process flow considerations may include, but is not limited to:</p> <ul style="list-style-type: none">• Avoiding u-shape, or circular processes where the “clean” or finished product end of the process can be contaminated by the material or input end of the process;• Controlling pedestrian walkways to avoid employees walking from the input to “clean” end of the process;• Avoiding where possible overhead platforms, catwalks or stairways where debris can fall into or on the product;• Avoiding equipment bottlenecks, corners or areas where product can be held up or accumulate.
13.7.1 Auditing Guidance
<p>This element will be audited as part of each site audit through observation. Evidence may include:</p> <ul style="list-style-type: none">• Process flow has been designed to minimize the risk of cross contamination;• The flow of personnel is designed to minimize the risk of cross contamination.

13.7.2 Control of Foreign Matter Contamination

What the SQF Code says

13.7.2.1 The responsibility and methods used to prevent foreign matter contamination of food packaging shall be documented, implemented and communicated to all staff.

13.7.2.2 Inspections shall be performed to ensure plant and equipment remains in good condition and potential contaminants have not detached or become damaged or deteriorated.

13.7.2.3 All glass objects or other brittle materials in food packaging handling/contact zones shall be listed in a glass register including details of their location.

13.7.2.4 Containers, equipment and other utensils made of glass, porcelain, ceramics, laboratory glassware or other brittle material (except where the product is contained in packaging made from these materials, or measurement instruments with glass dial covers or MIG thermometers required under regulation) shall not be permitted in packaging material manufacturing and storage areas.

13.7.2.5 Regular inspections of packaging material manufacturing and storage areas shall be conducted to ensure they are free of glass or similar materials and to update the glass register.

13.7.2.6 Glass instrument dial covers on manufacturing equipment and MIG thermometers shall be inspected at the start of each shift to confirm they have not been damaged.

13.7.2.7 Wooden pallets and other wooden objects used in packaging material manufacturing and storage areas shall be dedicated for that purpose, clean, maintained in good order. Their condition is subject to regular inspection.

13.7.2.8 Loose metal or plastic objects on equipment, equipment covers, and overhead structures shall be controlled or tightly fixed so as not to present a hazard to raw materials, work-in-progress or finished food packaging.

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13.7.2.9 Sharps of any type (e.g. knives, cutting blades, etc.) shall be monitored and controlled so as to not present a hazard to raw materials, work-in-progress or finished food packaging.

13.7.2 Implementation Guidance

What does it mean?

Foreign matter can originate from:

- External sources such as pests, raw materials, pallets, returnable dunnage and product returns;;
- Internal sources of foreign matter include the building (e.g., rust, insects and insulation), surface coatings (e.g., flaking paint, damaged render), equipment (e.g., nuts, pins, screws, washers, etc.), metal shavings, glass (e.g., from windows, or utensils) and wood (e.g., from pallets or brooms or other equipment).

In all cases, where there is risk for potential foreign matter contamination, procedures must be in place to eliminate or minimize the risk of foreign materials entering the product. The site needs to be aware of potential sources of foreign matter contamination, however, customer complaints (refer to 2.1.4) may provide an indication of the prevalence and priority.

What do I have to do?

The foreign matter (including glass) protocol must outline the sources of foreign materials, the methods of control and the responsibility for taking action when foreign materials or glass are detected in the manufacturing environment.

The protocol shall include removal of all tools and machine parts from the processing areas when maintenance has been completed (refer to 13.2.8.7) and this shall be implemented and supervised. Plant and equipment must be inspected regularly to ensure it remains in good condition so that nothing has detached, damaged or deteriorated. Personnel must be encouraged to report all recognized sources of potential contaminants.

Fabricated equipment covers shall be used wherever possible to prevent potential contamination from nuts, bolts, etc. Temporary repairs shall not be utilized within general manufacturing areas. The use of plastic, tape, string, cardboard or other non-permanent materials as a means to repair or alter the operation or equipment must be avoided. The site shall have included within its maintenance process (refer to 13.2.8.8) control measures to be taken when repairs are needed during process to protect product from foreign materials that could impact food safety. Containers, equipment and other utensils made of glass, porcelain, ceramics or other like material must not be permitted in any packaging manufacture and handling area.

Quality assurance staff must replace all laboratory glass containers with plastic containers if possible and avoid using glass instruments in manufacturing areas. Regular inspections must be made to ensure that these areas are free of glass and staff must be made aware of their responsibility to adhere to the company foreign matter and glass protocol. All overhead lighting must be protected and shielded (refer to 13.2.4.2).

The risk assessment of foreign material contamination and preventative controls shall be included within the food safety plan (2.4.3) development. Each site must assess its risks of foreign material contamination to product and develop specific controls within its environment.

Wooden pallets and dunnage are part of the food packaging industry and are not expected to be banned from manufacturing environments. Depending on the type of operation and the products being produced, the types of controls for the management of pallets can vary from one site to another. All facilities should have a program in place in which wood and plastic pallets and top frames undergo inspection for broken slats, loose nails and splinters, or foreign objects which could pose a risk to products. If pallets or top frames are stored for prolonged periods outdoors, then the pallets and top frames may need to be cleaned and inspected for vermin prior to entry into the manufacturing area Returnable dunnage should also be inspected prior to use in manufacturing.

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Knives and cutting instruments must be counted and controlled and kept clean to avoid cross-contamination. Snap-off blade knives of any kind should not be used in the packaging handling, storage or shipping areas. Additionally, staples, thumb tacks or other loose fastening devices should not be used on open notice or bulletin boards that are present in production, packing or storage areas.

13.7.2 Auditing Guidance

Foreign matter control (including glass) procedures shall be reviewed as part of the initial desk audit. Subsequently, foreign matter control procedures will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Foreign matter control procedures are documented;
- Foreign matter control procedures identify all potential sources of foreign matter contamination;
- Foreign matter control procedures are effectively implemented;
- Foreign matter control procedures include responsibility for foreign matter control;
- Foreign matter control procedures are communicated to staff;
- Inspections are conducted to prevent foreign material contamination of product;
- Temporary repairs are not used, unless properly identified and controlled, within the processing areas or where product is handled or stored;
- A glass register has been developed;
- The glass register is complete, and covers all glass located at the site;
- The glass register includes brittle plastic and other materials;
- Glass inspections are conducted regularly including instrument dial covers and thermometers;
- Wood used in packaging manufacture and handling areas are well maintained and clean;
- There are no loose materials on processing equipment;
- Knives and cutting instruments are clean and sanitized.

13.7.3 Managing Foreign Matter Contamination Incidents

What the SQF Code says

13.7.3.1 In all cases of foreign matter contamination the affected item shall be isolated, inspected, reworked or disposed of.

13.7.3.2 In circumstances where glass or similar brittle material breakage occurs, the affected area shall be isolated, cleaned and thoroughly inspected (including cleaning equipment and footwear) and cleared by a suitably responsible person prior to the commencement of operations.

13.7.3 Implementation Guidance

What does it mean?

The site must have established criteria for the identification, isolation and disposition of product affected when a foreign material issue is detected. The site must manage the incident with established procedures consistent with element 2.5.3 (Corrections and Preventative Actions).

What do I have to do?

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The site must have a procedure in place to identify, isolate, inspect and rework or dispose of product that is known to be at risk of foreign matter contamination. This shall include isolation, labeling, quarantine of affected product, and depending on the nature of the suspected contaminant, further inspection or examination of the product to determine the source and extent of the contamination so that a decision can be taken on its disposition.

Where a glass or similar breakage occurs, the procedure must include a glass clean-up process that covers the footprint of where glass shards may have been distributed. The procedure must include a shut-down of the whole area, and a thorough clean-up to eliminate all broken glass. Brooms, brushes, vacuums and footwear must be included in the clean-up. The area must be thoroughly inspected before recommencing operations.

13.7.3 Auditing Guidance

The foreign matter control (including glass) procedures shall be reviewed as part of the initial desk audit. Subsequently, the procedure including glass clean-up protocols will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Isolation and rework/disposition is included in the foreign matter control procedure;
- Isolation and rework/disposition is effectively implemented;
- Glass breakage procedure is included in the foreign matter control procedure;
- Glass breakage procedure includes clean-up of footwear, tools, brooms, brushes and other equipment;
- Glass breakage procedure is effectively implemented.

13.8 Waste Disposal

13.8.1 Dry and Liquid Waste Disposal

What the SQF Code says

13.8.1.1 The responsibility and methods used to collect and handle dry, wet and liquid waste and store prior to removal from the premises shall be documented and implemented.

13.8.1.2 Waste shall be removed on a regular basis and not build up in packaging material manufacturing, handling or storage areas. Designated waste accumulation areas shall be maintained in a clean and tidy condition until such time as external waste collection is undertaken.

13.8.1.3 Trolleys, vehicles waste disposal equipment, collection bins and storage areas shall be maintained in a serviceable condition and cleaned and sanitized regularly so as not to attract pests and other vermin. Exterior collection and storage bins must be covered.

13.8.1.4 Reviews of the effectiveness of waste management will form part of daily hygiene inspections and the results of these inspections shall be included in the relevant hygiene reports.

13.8.1 Implementation Guidance

What does it mean?

The procedures for storage and disposal of all types of waste – dry and liquid – must be documented and implemented. The procedure will include how waste is contained in appropriate, covered and labeled containers, the frequency of disposal, how it is disposed of and who is responsible for it. Customer requirements, local regulations and community expectations concerning recycling and waste disposal and transport must also be considered.

What do I have to do?

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As with solid waste, the disposal of any liquid waste from production and handling areas is essential to the maintenance of a clean and safe working environment. Procedures are to be in place to monitor the effective removal of liquid and solid wastes per written plant procedures.

On-site incinerators, compactors or other waste collecting/disposal equipment needs to be designed, installed, constructed and operated so as not to create a hazard to product or the surrounding environment. Compactors and other waste storage areas must not be located adjacent to any area where product is exposed. A Review of the path of waste removal to prevent cross contamination of waste with raw material, food packaging, equipment, manufacturing and storage areas should be considered and incorporated in waste removal activities.

Cafeteria/lunch room food waste shall be located and stored separately from manufacturing waste in covered pest-proofed containers and emptied at a frequency that prevents the attraction of pests.

The site must have a plan, where appropriate, to address the proper disposal or destruction of trademarked materials taking note of that provided by customers. If contracted disposal is used, the site must take measures to verify disposal procedures are followed and that the services of the contracted service provider is documented as per 2.3.3.

At the end of the shift or day (depending on the site and operation), all office trash and manufacturing needs to be removed by designated employees and disposed of in the external trash receptacle. All trash generated in the manufacturing and handling areas must be separated for recycling where possible.

Empty chemical drums shall be collected and transported to secured storage (refer to 13.2.11.8).

Exterior waste containers need coverage or lids to prevent attracting flies or vermin. It is also advisable to secure waste containers in regards to site security requirements (refer to 2.7)

Review of the waste collection and handling system should be incorporated as part of the internal audit program of the site (refer to 2.5.5).

13.8.1 Auditing Guidance

Waste handling, storage and disposal procedures shall be reviewed as part of the initial desk audit. Subsequently, waste storage and removal will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Waste handling, storage and disposal procedures are documented;
- Waste handling, storage and disposal procedures include how waste is contained in appropriate, covered and labeled containers; frequency of disposal; how it is disposed of; and who is responsible for waste handling and disposal;
- Waste handling, storage and disposal procedures are fully implemented;
- Waste handling, storage and disposal procedures adequately dispose of waste without risk of product contamination;
- Waste is regularly removed from packaging manufacture and handling areas;
- Waste collection and storage areas are maintained and cleaned;
- Containers for waste are properly maintained and cleaned;
- Trolleys, vehicles and equipment used for waste are properly cleaned;
- Daily inspections are conducted to monitor handling of waste;
- Records are maintained of waste disposal;
- The waste system is included in the internal audit program.

13.9 Exterior

13.9.1 Grounds and Roadways

What the SQF Code says

13.9.1.1 The grounds and area surrounding the premises shall be maintained to minimize dust and be kept free of waste or accumulated debris so as not to attract pests and vermin.

13.9.1.2 Paths, roadways and loading and unloading areas shall be maintained so as not to present a hazard to the food packaging safety operation of the premises.

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13.9.1.3 Surroundings shall be kept neat and tidy and not present a hazard to the hygienic and sanitary operation of the premises.

13.9.1 Implementation Guidance

What does it mean?

Unkempt surroundings (including the accumulation of unused equipment, pallets, bins, drums, pooling water or waste) can provide harborage for vermin and other pests and, in turn, pose a serious hazard to the hygienic operation of a food packaging operation.

What do I have to do?

The provision of lawn and landscaping is effective for sealing large traffic areas. The site should ensure that there is a vegetation-free perimeter zone around all buildings and storage areas that are surrounded by grass, plants or trees. High vehicle traffic areas are also required to be effectively sealed to prevent dusty conditions.

To prevent such a hazard, proper and purposeful measures for separation of drains and the site draining system shall be implemented. Additionally, these areas shall be kept clear of debris build up in and surrounding such areas.

Exterior construction projects that impact sealed areas should be reviewed, and controls established on a temporary basis during the project timeline.

Where employee amenities are external to the site, the access to the amenities must be sealed, and should be covered to allow for weather conditions.

13.9.1 Auditing Guidance

This element shall be reviewed as part of each site audit. Evidence may include:

- Exterior grounds are maintained, tidy and uncluttered and do not provide pest harborage areas;
- Exterior grounds are managed to minimize dust or other hazards;
- Exterior grounds are kept free of waste;
- Exterior paths and roadways are managed to minimize dust or other hazards;
- Exterior loading and unloading areas are maintained to minimize hazards;
- Grass and vegetation is kept under control in surrounding areas;
- Equipment that is stored outside is protected from the weather;
- External paths from amenities to the site are sealed.