

Cumberland Packaging Ltd

HAZARD ANALYSIS STUDY REPORT

Date of assessment: 01 June 2024

Review date (1) :

Review date (2) :

Review date (3) :

Approved By	Mr. J. Watson
Signature	<i>John Watson</i>
Position	Managing Director
Approval Date	01 June 2024
Issue number	Twelve (12)

Terms of reference

The HARA study covers all products and processes at the Cumberland Packaging Ltd site and has been conducted in accordance with the manufacture and supply of corrugated packaging products intended as a secondary packaging medium for indirect food contact by the customer.

The aims and objectives of the organisation is to gain ongoing certification to the BRCGS Standard for Packaging Materials Issue 6.

Scope

The study covers the flexographic printing, slotting, die-cutting, gluing and stitching, of corrugated fibre board to produce plain and printed multipoint glued and unglued cases, trays, fitments, inserts, lids and layer pads with cut or un-cut purchased polystyrene foam void fitments adhered with PVA glue to use as secondary packaging for food and consumer products.

The food and hygiene sensitive safety hazards considered by the study are microbiological, foreign objects and chemical contamination, as well as possible packaging defects critical to consumer safety.

All elements of the HARA study have been carried out by the following HARA Team;

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|----|-----------------|----------------------------|--------------------------------|
| 1) | Mr. R. Herridge | Consultant | (Authorised HARA Team Leader). |
| 2) | Mr. J. Watson | Managing Director. | |
| 3) | Mr. R. Bhardwaj | General Manager. | |
| 4) | Mr. S. Field | Senior Operations Manager. | |
| 5) | Mr D. Bines | Compliance Manager. | |

The HARA Team will review the HARA Study at least annually in accordance with the requirements of the company's management review meeting and as a result of customer complaints, product failures, product withdrawals, results of internal audits of prerequisite programmes, results of external or third party audits, or following significant changes to the material, process, technology, BRCGS Standard, legislation or product range supplied to the customer.

The Team has considered the following points;

- a) Historical, known and foreseeable product safety hazards associated with specific processes or raw materials**
- b) Intended use of the product if this is known which may not always be the case**
- c) Known likely product defects that affect safety such as paper cuts or collapsing pallets**
- d) Relevant codes of practice of recognised guidelines such as FEFCO**
- e) Legislative requirements such as EC 1935/2004 and EU 10/2011 (and amendments)**

Product description and intended use

Cumberland Packaging Ltd manufacture and supply corrugated packaging products that are used by our customers to provide a secondary packaging medium to their products.

The products are supplied in flat form and are identified with the product details for trace ability purposes should the need arise. We ensure our suppliers provide appropriate and documented certification to demonstrate conformance to current legislation.

All of our raw materials are sourced from BRC Certified Suppliers, and all suppliers are currently also hold FSC Chain of Custody Certification. We only use raw materials from our approved suppliers and never use recycled materials from our suppliers.

Cumberland Packaging Ltd classify our products as low/medium risk as they are not used in direct contact with food and other hygiene sensitive products. However, the products may be utilised in higher risk categories by our packer fillers.

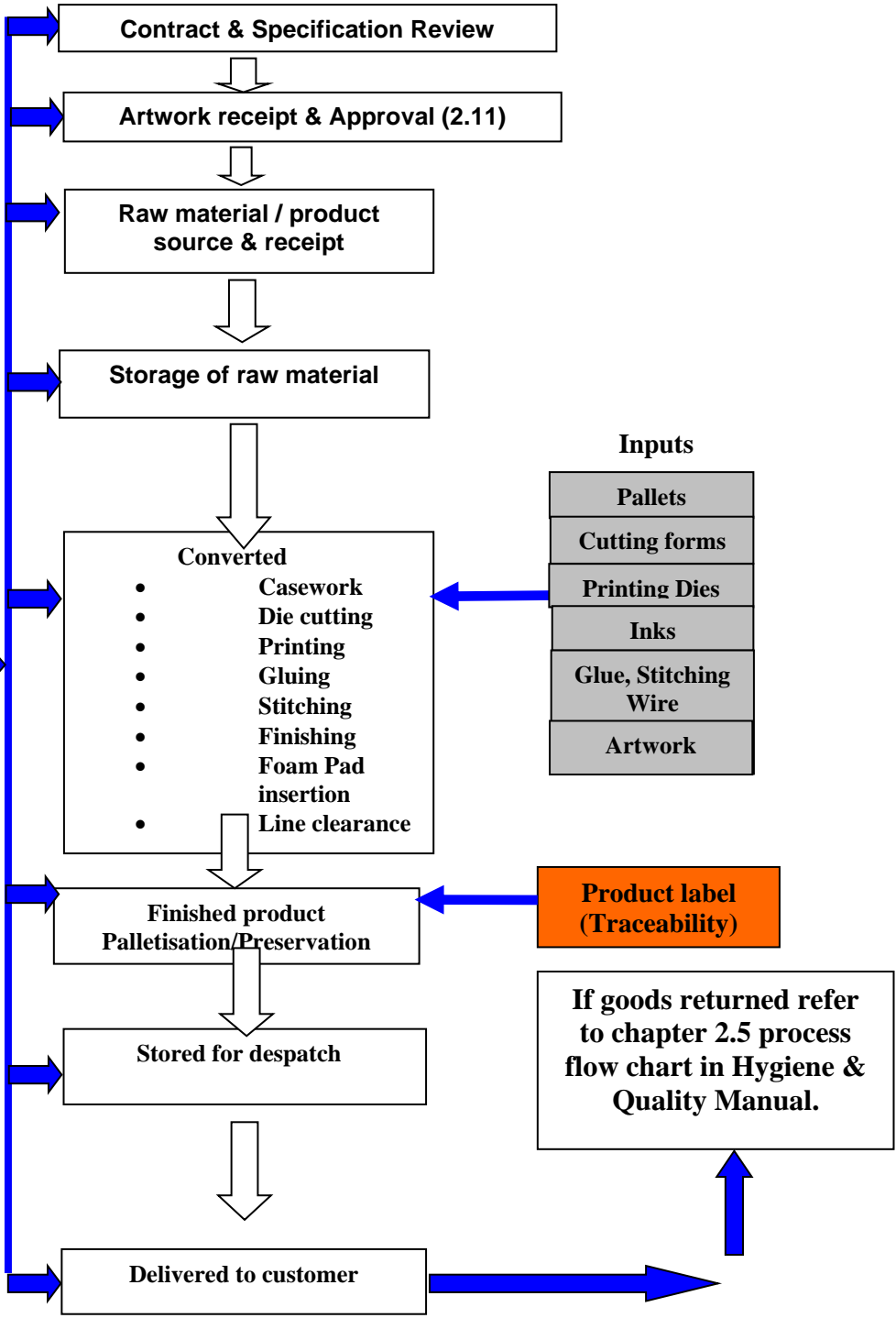
Any contamination of the product which could be transferred to the customers product or may pose a risk to end users is extremely important therefore that we identify all potential food safety hazards throughout our manufacturing process and implement appropriate control measures.

Process flow diagram

The process flow diagram details the process steps and prerequisites of the production process from specification and contract review to delivery of finished product to the customer, including returns. Process flow from intake to dispatch is arranged to minimise risk of contamination or damage to the product.

The team has considered the need for in-line testing and measurement, and has deemed neither to be required. Process controls ensure products meet customer requirements.

- Pre-requisites
factory wide
contamination risks**
- Glass & Brittle Plastic
 - Blades, Sharps, Staples
 - Pests
 - Microbiological
 - Taints & odours
 - Lubricants & chemicals
 - Compressed air
 - Engineering parts
 - Dust & dirt
 - Blood/bodily fluids
 - Personal medicines
 - Hair
 - Wood
 - Jewellery
 - Food stuffs
 - Waste/Off-cuts/Recycled Materials
 - Extraneous matter
 - Printing
 - Die Cutting
 - Gluing
 - Casemaking
 - Transportation
 - Defects
 - Malicious Fraud
 - Raw Materials Fraud



Process flow verification / Change log

The HARA team has agreed the food safety hazards associated with each process step. The HARA study and the control and monitoring measure will be reviewed at least annually and **as a result of customer complaints, product failures, product withdrawals, results of internal audits of prerequisite programmes, results of external or third party audits, or following significant changes to the material, process, technology, BRCGS Standard, legislation or product range supplied to the customer.**

Date	Amendment	Signature
21-06-2021	Scope of HARA updated and HARA updated as issue eight (8)	Ian Stubbles
21-06-2022	HARA reviewed and updated as issue Nine (9)	Ian Stubbles
04-11-2022	Minor amendments and tidying up (inclusion of stitching in inputs)	
29-04-2024	Updated Personell list	Sam Field
01-06-2024	Updated Personell list	Sam Field

Pre-requisites Food safety hazards

Foreign Objects And contaminants:

- Blades / Sharps / Staples
- Off-cuts and other product related waste
- Blood/Bodily fluids
- Personal Medicines
- Taints & odours
- Glass, brittle plastic or ceramic
- Compressed air
- Wood
- Soil
- Pests (rodents, mice, birds)
- Insects
- Jewellery and other personal items
- Hair
- Food stuffs
- Malicious contamination/ Food defence
- Raw material fraud
- Extraneous matter

Chemicals

- Inks
- Oil
- Cleaning materials
- Grease
- Glue
- Solvents

Hazard analysis - risk to product safety and integrity

L = Likelihood of the Occurrence

3 = High
2 = Medium
1 = Low

S = Severity of the Outcome

3 = High
2 = Medium
1 = Low

R = Risk Level (L x S)

1-3 = Low risk (establish control measures where appropriate)
4-6 = Medium risk (establish control measures)
9 = Substantial risk to integrity (Critical Control Point)

Hazard Analysis

Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual / Reference Document
<p><i>Analysed in the table are the contamination and allergen hazards that may be present throughout the manufacturing process.</i></p> <p><i>The hazards detailed are not process specific and are controlled by essential factory wide procedures.</i></p>	Glass and brittle plastics	F	1	3	3	NO	Minimise glass in the factory and audit. Ensure glass breakage action and investigation systems are in place. Windows are toughened, double glazed units. Lights high level LED shatterproof units. EFks protected and high level.	Glass and brittle plastic control procedure Part 2, section 9. (procedure 5.7.2) Glass & Brittles Risk Assessment on TAM
	Blades/Sharps and Staples	F	1	3	3	NO	System for safe issue, return and disposal of blades. Ensure blade loss/damage action and investigation systems are in place. No Staples/Drawing Pins in Production.	Knives & Blade control procedure Part 2, section 10. (procedure 5.7.11)
	Pests	M	1	3	3	NO	Ensure effective and meaningful pest control systems are in place and maintained via Prokill	Pest control surveillance records & action reports Part 1, section 19.
	Personnel/Malicious Intervention	F/M/C	1	2	2	NO	Clearly communicate personal hygiene rules and ensure hygienic conditions are monitored by audits. Personnel are all vetted at induction stage and site security is controlled. Personnel are all trained and refreshed in Hygiene requirements	Hygiene Code of Practice Part 1, section 14. (1.1 to 1.6 Inclusive) Risk assessment security annually reviewed. Part 7, competence awareness and training
	Dust, dirt compressed air, Unintended migration	F/M/C	1	2	2	NO	Ensure all cleaning and maintenance requirements are specified and are carried out as scheduled.	Hygiene Code of Practice Part 1, section 16 & 17
	Wood splinters	F	1	1	1	NO	All wood (pallets/tops/work stations, etc) damage or defects to be reported to management.	Contamination control Part 1, section 9.
	Hairs	F/M	1	1	1	NO	This is extremely low risk with no historical customer complaints relating to stray hairs, and thus hair coverings and beard snoods are not required currently.	Hygiene Code of Practice Part 1, section 14, page 2, (1.4.b)
	Blood & Bodily Fluids.	M	1	1	1	NO	Ensure accidents are reported immediately and cuts are suitably protected.	Hygiene Code of Practice Part 1, section 14, page 1 (1.2)
Personal medicines	F	1	1	1	NO	No personal medicines are allowed on the factory floor.	Manual 1.14.6	
Foodstuffs Bacteria/pathogen	F/M	1	1	1	NO	Restrict food and drink to designated areas outside of production	Hygiene Code of Practice Part 1, section 14, page 1, (1.6.1 & 1.6.2)	
Jewellery and personal items	F	1	1	1	NO	Restrict wearing of jewellery (Wedding band and continuous earrings) and bringing of personal items into production areas.	Hygiene Code of Practice Part 1, section 14, page 2 (1.5)	
Medical Conditions requiring screening to eliminate contamination hazard	M	1	1	1	NO	Secondary packaging that does not come into contact with food or other hygiene sensitive products. Therefore very low risk of contamination and screening is not considered as necessary		

CCP = Critical Control Point

F = Foreign Body hazard

M = Microbiological hazard

C = Chemical hazard

Hazard Analysis								
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual / Reference Document
<i>Print approval</i>	Contamination caused by printing or deliberate fraud Loss of essential information during pre-press activity or during printing.	F/M/C	1	1	1	NO	Ensure the approval process and ink selection procedure is followed. Particular attention to the approval process requesting permission to print the brand. Line clearance for excess packaging. Vulnerability Assessment Plan The same control measure apply for commercial print trials Stereos checked to ensure no damage prior to print run and samples during print run	Contamination control <i>Part 1, section 9.</i> Control of artwork Vulnerability Assessment
<i>Raw material / Product / source & receipt</i>	Poor handling and hygiene controls at suppliers	F/M/C	1	1	1	NO	Only purchase raw material/product from approved suppliers/sub-contractors who can demonstrate the required level of hygiene controls. Auditing and approval status	Assessment of Suppliers & Sub-contractors <i>Part 2, section 2. (Procedure 3.5.1)</i>
	Contaminated deliveries / Malicious intervention	F/M/C	1	1	1	NO	Ensure all deliveries of raw material are inspected for odour, damp, damage or contamination including deliberate contamination.	Contamination control <i>Part 1, section 9.</i> Control of non-conforming products <i>Part 2, section 8. (Procedure 5.6.1)</i>
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual / Reference Document
<i>Storage of raw material</i>	Inappropriate/poor handling and hygiene controls in Stores	F/M.	1	1	1	NO	Ensure that all raw materials remain in original packaging until issued to production. Ensure that the stores department cleaning schedule is applied and external doors are kept closed when not in use	Contamination control <i>Part 1, section 9.</i> Hygiene Code of Practice <i>Part 1, section 16, (3.1.1 to 3.8.1 Inclusive)</i> & <i>Part 1, section 17, page 2. (4.4.8)</i>
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual / Reference Document

<i>Unpacked for production</i>	Contamination caused by poor handling and hygiene controls in Stores	F/M	1	1	1	NO	<p>Ensure that all raw material is inspected for odour, damp or contamination when unpacking and is stored on clean pallets for issue to production</p> <p>Ensure that all personal hygiene rules are applied</p>	<p>Contamination control Part 1, section 9.</p> <p>Hygiene Code of Practice Part 1, section 14. (1.1 to 1.6.3 Inclusive)</p>
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		Hazard Analysis						
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
<i>Raw material converted into the finished product</i>	Product contamination in machine set-up caused by poor equipment controls	F/C	1	1	1	NO	Ensure setting tools and associated equipment are removed and placed in the designated and safe area on completion of machine set. Carry out visual checks on a regular basis.	Hygiene Code of Practice Part 1, section 18, page 2. (5.5.9 a & b)
	Contamination during board manufacture and conversion caused by poor hygiene and process inspection controls.	F/M/C	1	1	1	NO	Ensure physical and visual quality and hygiene inspections are carried out in accordance with documented criteria. Maintain GMP and hygiene culture at all times. Report defective equipment/product or incidents of contamination/poor quality and product safety concerns in every instance. Ensure cutting formes, printing dies etc are in sound condition at all times (prior to and after use)	Process control, inspection and test. Part 2, section 7. (Procedure 5.2.1) Contamination control Part 1, section 9. Control of non-conforming products Part 2, section 8. (Procedure 5.6.1)
	Contamination of finished product caused by packaging/wrapping	F/M/C	1	1	1	NO	Carry out visual inspections of product packaging/wrapping at clearly defined intervals	Process control, inspection and test. Part 2, section 7. (Procedure 5.2.1)
<i>Finished Product palletisation, Identification & Preservation</i>	Contamination caused by poor palletisation and handling controls	F/M/C	1	1	1	NO	Ensure that the product is adequately protected from the environment and is free from contamination and strapping damage. Ensure that customer palletisation and protection specifications are adhered to at all times. Ensure the pallet/product label is attached	Process control, inspection and test. Part 2, section 7. (Procedure 5.2.1) Finished product inspection and test procedure.

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Hazard Analysis

Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
<i>Storage of finished product</i>	Contamination caused by poor handling and hygiene controls in finished goods stores	F	1	1	1	NO	<p>Ensure that all finished product remains in original and appropriate packaging until released for delivery.</p> <p>Ensure that the stores department cleaning schedule is applied and external doors are kept closed when not in use</p>	<p>Contamination control Part 1, section 9. Hygiene Code of Practice Part 1, section 16, (3.1.1 to 3.8.1 Inclusive) & Part 1, section 17, page 2. (4.4.8)</p>
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
<i>Outsourced Products/ Artwork/Stereos/Formes</i>	Products not meeting the required quality standards	F/M/C	1	1	1	NO	<p>The Supplier has to undergo a supplier approval procedure prior to the work being approved & is periodically reviewed based on analysis of risk and approved performance criteria.</p>	<p>Assessment of Suppliers & Contractors. Ch1.13 page 35</p> <p>P51. Ch 2.2 Method.</p>
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
<i>Transportation of finished product</i>	Generic contamination caused by poor handling and hygiene controls of delivery vehicle trailer.	F	1	1	1	NO	<p>Ensure that the trailer is inspected for odour, damp or contamination prior to and after each delivery.</p> <p>Ensure that trailer curtains are free from damage prior to and after each delivery.</p> <p>Ensure that all personal hygiene rules are applied</p>	<p>Contamination control Part 1, section 9.</p>

Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
Contractor/ Employee (inc temp workers). Servicing, Maintenance, and Repair.	Contamination caused by lack of controls with regard to due diligence and safety.	F/M/C	1	1	1	NO	Ensure that contractor duties are adhered to at all times. Supervise activities and apply strict control measures. Ensure that all personal hygiene and site rules are applied and adhered to.	Maintenance staff/Contractor duties Part 1, section 18, page 2. (5.5.8) Interviews and induction to all new employees and agency personnel. In accordance with good personnel practices Part 1, section 7
Process Step	Hazard	Type	L	S	R	CCP	Control Measures	Manual Reference Document
Drivers/ Visitors Conduct whilst on site	Lack of regard to due diligence and safety.	F/M/C	1	1	1	NO	Ensure that Drivers/Visitors are made aware of their responsibilities whilst on site. Supervise activities and apply strict control measures. Ensure that all personal hygiene and site rules are applied and adhered to.	Hygiene/safety information leaflet issued in every instance and reviewed with management Part 1, section 9, page 4
Work Space And storage space	Cramped space causing negative impact on ability to provide quality control and prevent contamination	F/M/ C	1	1	1	NO	Ensure adequate working space between machines and processes. Easy access to machines for maintenance and cleaning Product flow/segregation maps show processes in each geographical area.	..\Factory\Factory layout-product flow-segragation
Ventilation	Ventilation causing risk contamination to product	F/M/ C	1	1	1	NO	Only company approved fans are to be used in production areas. Fans are kept clean and airflow is not directed onto product or equipment	1.17.10 hygiene & quality manual
Cleaning	Contamination caused by poor site hygiene and lack of cleanliness	F/M/ C	1	1	1	NO	There are documented daily, weekly and monthly cleaning programmes with high level annual cleaning also. This includes production areas, storage areas, machinery, and welfare areas	TBC

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