BRCGS Packaging Materials

Guidelines for Glass Manufacturers

British Glass

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For more information about BRCGS, contact:

BRCGS
Second Floor
7 Harp Lane
London EC3R 6DP

Tel: +44 (0) 20 3931 8150
Email: enquiries@brcgs.com
brcgs.com

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Introduction

The Global Standard Packaging Materials, Issue 6, (the Standard) provides a robust framework for all types of packaging manufacturer to assist them in the production of safe packaging materials and to manage product quality to meet customers' requirements, while maintaining legal compliance. Certification against the Standard is recognised by many brand owners, retailers, food service companies and manufacturers around the world when assessing the capabilities of their suppliers.

This publication provides a practical and specific interpretation of the Standard for the glass container manufacturing industry. Although the recommendations in this guideline will cover most applications in the glass factory, they may need to be modified for certain special or individual cases as determined by the glass manufacturer. The guide shows how the unique manufacturing process fits with and is supported by the requirements of the Standard.

The guideline can be used by industry members as a reference document, and internal procedures and standards can be checked against it to meet all the necessary requirements of the Standard.

It will also help all glass container manufacturers fulfil their due-diligence responsibilities to their customers.

The guideline has been prepared by the British Glass Technical Committee, which is made up of technical representatives from all the UK glass container manufacturing companies in consultation with BRCGS.

The guideline is based on the collated results of hazard analyses and risk assessments carried out by British Glass member companies in relation to the Standard and other management system standards.

The Standard is applicable to all packaging sectors, and it accepts that some clauses may not be applicable in some instances. This guideline explores these clauses that are now generally accepted as exemptions based on risk, applying to glass container manufacture, or that are applicable only to parts of the manufacturing site.

Where the Standard requirements are applicable, their degree of applicability may be determined using risk assessment. The application of the Standard should ensure that the glass containers are suitable and safe for their intended use, and appropriate for the environment within a glass container manufacturing facility.

Examples of risk-based exemption, partial application, and risk-based derogation are:
- the use of cullet
- traceability of raw materials
- hygiene and cleaning controls for certain areas of the process
- hand-washing
- workwear control.

The Standard requires that exemptions are kept under review by the site to evaluate their relevance and validity, particularly where physical changes have occurred to the manufacturing site or process. They will be reviewed by the auditor in each subsequent audit.

Part II
Applying the standard to glass manufacture

The Standard is applicable to all packaging sectors, and it accepts that some clauses may not be applicable in some instances. This section explores the clauses that are generally accepted as exemptions on the basis of risk, applying to glass container manufacture, or that are applicable only to parts of the manufacturing site.

Where the Standard requirements are applicable, their degree of applicability may be determined using risk assessment. The application of the Standard should ensure that the glass containers are suitable and safe for their intended use, and appropriate for the environment within a glass container manufacturing facility.

Examples of risk-based exemption, partial application, and risk-based derogation are:
- use of cullet, a product of recycling used glass
- traceability of raw materials
- hygiene and cleaning controls for certain areas of the process
- hand-washing
- workwear control.

The Standard requires that exemptions are kept under review by the site to evaluate their relevance and validity, particularly where physical changes have occurred to the manufacturing site or process. They will be reviewed by the auditor in each subsequent audit.

Auditing to the standard for glass container manufacture

The Standard requires auditing to be carried out by an auditor from a BRCGS approved certification body who has sufficient expertise, as defined in the Standard, in all aspects of the glass-container manufacturing process.

It is intended that member companies will make this guideline available as necessary to any first, second- or third-party auditors. Auditors who have any concerns about the advice given in this guideline regarding any particular aspects of the Standard should seek clarification from BRCGS (enquiries@brcgs.com).

Audit duration

BRCGS has developed an audit duration calculator which determines the length of time of an audit for any type of site. The calculator considers how many processes and people are on site, and how large the site is. Glass container manufacturing represents a single process and usually takes place on sites where the production facility forms a small part of the total area. As a useful guideline to represent the duration of the audit, an assessment of a number of certified glass companies was made and the most common duration guide typically would be:
- 4 furnaces and below 1.5 days + 0.5 days per ancillary
- 5 furnaces and above 2 days + 0.5 days per ancillary (ancillary - for example decoration process or head office functions).

An example of the raw materials used in container glass manufacture, which covers all colours of glass, is provided in Appendix 2.

Glass manufacture is a continuous process from batch preparation to packing; there are no intermediate stages. However, there may be secondary processes such as decoration of containers.

Relevant clauses for glass container manufacture

Unlike other packaging materials covered by the Standard, glass raw materials are melted in a furnace at temperatures around 1500°C. Additionally glass containers are formed and annealed at temperatures between 1100°C and 550°C.

Glass as a material is regarded as providing an absolute barrier to any form of product contamination. It is the only packaging material rated 'generally recognised' as safe' (GRAS) by the US Food and Drug Administration.

The filling and packaging of glass containers with food or drink generally does not take place in glass container manufacturing facilities.

Many aspects of hazard or complaint analyses carried out in relation to BS EN ISO 9000 and hazard analysis and risk assessment (HARA) systems are similarly applicable to the Standard as detailed in parts 2 and 6.

Glass is an inorganic material with no moisture content and is therefore considered to be inert. It provides an absolute barrier to migration or permeability issues and concerns. The nature of the conversion of raw materials to molten glass means that upstream traceability is effectively curtailed at the container-forming stage. This limitation is recognised in Traceability Compliance for European Container Glass Industry, published by FEVE (the European Container Glass Federation)1.

Glass manufacture is a single process from furnace to cold end, carried out at a single manufacturing site (see flow chart in Appendix 1).

1 Traceability Compliance for European Container Glass Industry, FEVE, March 2012