



FoodDrinkEurope Printed Cartons Guidance Document

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This guidance document consists of eight sections covering:

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A: Disclaimer

This guidance has been prepared in good faith by FoodDrinkEurope for the benefit of and potential use by its members. This guidance is not intended to be legally binding or to create new legal obligations on parties across the supply chain unless agreed by them, but to reflect and inform best practice within the industry. Attempts have been made to check that this guidance is accurate and reliable as of April 2017, but THIS GUIDANCE IS PROVIDED WITHOUT ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER. To the extent permitted by law, FoodDrinkEurope disclaims any and all responsibility or liability in respect of the content or use of the guidance. Individual companies are solely responsible for their use of and reliance on this guidance, as well as their compliance with, or failure to comply with, applicable laws and regulations. This guidance is not intended to provide specific advice, legal or otherwise, and laws may vary by country and jurisdiction. Companies are recommended to seek the advice of an attorney or other professional to ensure compliance with their legal obligations and on any and all issues of liability, having regard to the individual circumstances, their specific objectives and the terms agreed with other commercial entities.

What is the purpose of this document? Who is it aimed at?

This document is intended to illustrate best practice in ensuring the regulatory compliance of printed cartons intended for packaging food products. It is aimed at individuals who have responsibility for ensuring the compliance of printed cartons with food contact legislation, for example Packaging Managers or Technologists, Technical Managers or Packaging Buyers. The purpose of this document is to encourage an appropriate dialogue and sharing of compliance information between food producers and their packaging suppliers. The document provides the above individuals with guidance on the issues which should be considered in order to assess compliance and provides links to a number of Regulatory and non-Regulatory standards, including industry best practice guidance.

B: Scope

This guidance applies only to printed cartons manufactured from board. Other types of printed packaging (e.g. flexible or rigid plastics) are excluded, however the approach to compliance described in this document could *potentially* be applied to other printed packaging materials.

Although the scope of the document is restricted to printed cartons, consideration should be given to other components of the overall pack (e.g. the board substrate, inner liners, trays, labels etc.) in order to accurately assess the potential for migration from the overall pack.

Note: This guidance applies only to printing applied to the non-food side of the carton. In those special cases where it is required to print on the food contact side of the carton, particular care is needed and detailed discussion is required by all parties in the supply chain to ensure compliance. The European Printing Ink Association (EuPIA) has produced Good Manufacturing Practices (GMP): Printing Inks for Food Contact Materials where handling of printing inks and varnishes intended to come into direct contact with Foodstuffs is addressed.

This guidance is available on the EuPIA website:

http://www.eupia.org/uploads/tx_edm/2016-03-31-EuPIA_GMP_4th_version_final.pdf

C: Introduction and purpose of document

This document has been developed to facilitate a dialogue between the technical representatives across the carton packaging value chain, with a view to seeking to ensure that packaged food products are safe and comply fully with all applicable EU legislation. Specifically, it is intended that following this guidance will minimise the risk of migration of substances from the printed carton into the food and the risk that any migration will render the packaging non-compliant with Article 3 of Regulation (EC) No 1935/2004 or unfit for the food manufacturer's purposes (Please refer to Section D below).

FoodDrinkEurope believes that there is a shared ownership for food packaging compliance along the supply chain. The guidance which follows should therefore be read against this fundamental philosophy.

The responsibilities of the different parties along the supply chain in ensuring food safety compliance are detailed below in Section E.

In addition to the regulatory compliance, issues covered by this guidance document, food manufacturers / packers and other parties in the supply chain should also take note of any contractual requirements laid down by their customers.

This document is being made available to FoodDrinkEurope members as an example of good practice.

The guidance has been designed to contain sufficient detail to enable it to be used by relatively small businesses, which may not have technical expertise in inks or printing technologies or access to dedicated packaging technologists.

It should also be noted that principles of this guidance could be used either as a tool to seek to ensure the safety and compliance of new product / packaging combinations, or as a means of assessing existing product ranges.

D: Regulatory background:

Food Contact Materials in the EU are governed under the Framework Regulation (EC) No 1935/2004¹. Specific harmonised EU legislation currently exists only for plastics, ceramics, regenerated cellulose films, recycled plastics and active and intelligent materials and

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:338:0004:0017:EN:PDF>

articles. Regulation (EU) No 10/2011 includes both overall and specific migration limits (SML) for various chemical constituents of plastics.

Other forms of packaging are covered by the Framework Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food.

Article 3 of Regulation 1935/2004 requires that materials and articles shall be manufactured in compliance with good manufacturing practice so that, under normal or foreseeable conditions of use, they do not transfer their constituents into food in quantities which could:

- a) endanger human health**
- b) bring about an unacceptable change in the composition of the food**
- c) bring about a deterioration in the organoleptic characteristics of food**

Regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food provides further clarification on good manufacturing practice applicable to all sectors and stages of the packaging supply chain, up to but excluding the production of starting substances (this includes material and article manufacturers, their raw material suppliers, material converters, packers and fillers, sellers and importers).

All the above parties are required to establish and implement quality assurance and quality control systems and to maintain related records and documentation to demonstrate compliance with good manufacturing practice (and hence compliance with Article 3 of Regulation 1935/2004 above).

Attention is drawn to the Annex to Regulation 2023/2006², which specifies detailed rules on good manufacturing practice for processes involving the application of printing inks to the non-food contact side of a material or article. The text at the date of this guidance document is reproduced below for convenience (however members are recommended to consult the full legal text via the link provided above and take legal advice as appropriate):

1. Printing inks applied to the non food-contact side of materials and articles shall be formulated and / or applied in such a manner that substances from the printed surface are not transferred to the food-contact side:

- (a) through the substrate or;
 - (b) by set-off in the stack or the reel,
- in concentrations that lead to levels of the substance in the food which are not in line with the requirements of Article 3 of Regulation (EC) No 1935/2004.

2. Printed materials and articles shall be handled and stored in their finished and semi- finished states in such a manner that substances from the printed surface are not transferred to the food-contact side:

- (a) through the substrate or;
 - (b) by set-off in the stack or reel,
- in concentrations that lead to levels of the substance in the food which are not in line with the requirements of Article 3 of Regulation (EC) No 1935/2004.

3. The printed surfaces shall not come into direct contact with food.

² <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32006R2023>

The references to Article 3 of Regulation (EC) No 1935/2004 are important as these clarify that components of printing inks are covered by the above legislation.

It follows that manufacturers of printed materials or articles intended for packaging food should:

- a) assess the safety of the substances used
- b) assess the potential for migration into the food
- c) carry out a toxicological risk assessment if migration can take place

The likelihood and extent of migration will depend on the:

- a) nature, composition and storage / usage instructions of the food to be packaged
- b) composition and design of the packaging material(s) used, taking into account any barriers to migration which may be present
- c) method by which the printed packaging is manufactured, stored and converted

It follows that any assessment of the potential for migration must relate to a specific combination of a given food, in a given pack design, at a given pack weight. Any change to the composition of the food, the design of the pack, the composition of any of the components of the pack or the pack size or usage instructions could potentially change the potential for migration. When appropriate, details of changes should be communicated to the printed carton supplier.

Theoretically the issues set out in this document should therefore be considered for every unique combination of food product and printed packaging item. It may however be possible, subject to appropriate risk assessment, for food products and / or packaging types to be “grouped” into categories of similar risk, thus avoiding the need for multiple consideration of several similar products in a range. In addition, the document could be used to assess the risk of “worst cases” such as for example the lowest density (lightest) or highest fat product in a particular range.

It should be noted however that any subsequent changes to specification of either the food or the overall package should be carefully assessed to determine if they are likely to change the potential for migration.

National legislation on printing inks:

Swiss Ordinance (EFTA member):

https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/gesetzgebung-lme/verordnungen-und-erlaeuterungen-lebensmittelrecht-2017.html#accordion_5921900891485231822119

The 2007 revision of the Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) introduced new regulations on packaging inks. The Ordinance came into force on 1 April 2008, with a transitional period of 2 years. A revised document was published in February 2011 and came into force in May 2011.

The Swiss Ordinance can be accessed on the website of the Federal Office of Public Health (FOPH) in the official languages (German, French and Italian):

<http://www.bag.admin.ch/themen/lebensmittel/04867/10015/index.html?lang=de>

An unofficial English translation of the Swiss Packaging Inks Ordinance can also be found on the FOPH website:

<http://www.bag.admin.ch/themen/lebensmittel/04867/10015/index.html?lang=en>

Packaging inks may only be manufactured from the substances set out in Annex 1 (Lists I, II and III of plastics) and in Annex 6. The latter Annex 6 lists binders (monomers); dyes and pigments; solvents (including the energy curing monomers); additives (other than the additives used in the preparation of pigments) and photoinitiators.

Annex 6 is divided into lists A and B. Part A contains evaluated substances intended to be used in the manufacture of food contact materials. For the substances without a numerical value in the column SML, the value of the global migration of 10 mg/dm² or 60 mg/kg according to the cases (cf Art. 3 of annex 1) is considered as the limit value.

The substances listed in Part B have not been subjected to any officially recognised scientific evaluation (such as that of the scientific committee of the EFSA). The use of these substances is permitted if no transfer of these substances to food or food simulants can be detected. The relevant proof can be provided by means of a "worst case" calculation or by a practical experiment.

The substances in Part B must not be detectable in a migration test in the lowest possible concentration at which a substance may be detected using a valid method of analysis. The detection limit depends on the composition of the substance; this limit, expressed as a concentration, must in no case exceed 0.01 mg/kg of food or food simulants (including the analytical tolerance). For substances that can be allocated to a group of compounds with similar toxicology or similar basic structure (e.g. isomers), this limit value applies to the sum of the concentrations of the substances.

Annex 6 is available from the FOPH website (link above) and was most recently updated on 1 December 2016, with the changes coming into effect on 1 May 2017

The European Commission has announced a measure of printed food contact materials by mid-2018.

E: Responsibilities for food safety compliance:

As a matter of best practice, we consider that the parties in the supply chain have the following responsibilities:

1. The food manufacturer / packer:

- to document and share the key properties / characteristics of the food with the printed carton supplier
- to detail within the specification information on the overall pack design and the intended use of the packaging component throughout the planned product lifecycle.

Note: Both parties to the transmission of this information should take due regard of any confidentiality or non-disclosure agreements which may be applicable. Please see paragraph F below for details.

2. The printed carton supplier:

- to communicate key elements of the food product specification and usage instructions and the composition and design of packaging material to their component suppliers (e.g. inks, coatings, adhesives and substrates).
- to select components (e.g. inks, coatings, adhesives, substrates and press consumables) that are suitable for the intended application based on the information supplied within the food product specification / usage instructions and taking into account the presence of any functional barrier (please see definition below).

- to ensure that the food contact packaging is manufactured in accordance with good manufacturing practice (GMP), as required by Regulation 2023/2006.

Notes:

1. The term “functional barrier” is defined in Commission Regulation (EU) No 10/2011 (as amended) on plastic materials and articles intended to come into contact with food:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2011R0010:20111230:EN:PDF>

Article 3, section 15 reads: “*functional barrier*” means a barrier consisting of one or more layers of any type of material which ensures that the final material or article complies with Article 3 of Regulation (EC)No 1935/2004 and with the provisions of this Regulation;”

2. The term “absolute barrier” is generally understood to refer to a barrier which prevents all migration (such as for example a glass bottle or an aluminium can). Note that absolute barriers are not the same as functional barriers as the latter may still permit a low level of migration (<10 ppb) while still ensuring compliance with Regulation 1935/2004. NOTE: “absolute barrier”: - effective with all types of food and with all kinds of migrants;

“functional barrier”: - effectiveness needs to be evaluated on a “case by case” basis.

3. Component suppliers:

- to recommend only materials, which, subject to the information described above, when used in the manner intended, enable compliance with Article 3 of Regulation (EC) No 1935/2004 with respect to migration, when used in accordance with the supplier’s technical and information.

Note: in response to the increasing focus on migration from printed packaging, many ink suppliers have developed special “low migration”* inks and will be able to advise on their selection and use.

* The term “low migration ink” is defined in the Packaging Ink Joint Industry Task Force (PIJITF) “Explanatory Note on the assessment of migration potential from food packaging inks and its dependency on the packaging structure” as follows:

“A low migration ink is an ink designed for use on food packaging that is formulated using selected components which should ensure that migration from the resultant printing ink film will be within accepted migration limits, provided that the packaging structure is suitable, and the packaging ink is applied under Good Manufacturing Practices in accordance with guidance given by the ink supplier for the intended application.”

Prior to this definition, different ink manufacturers were using different terminologies to describe low or reduced migration products. Where inks are deemed to be “low migration” (or similar), it is therefore recommended that the exact meaning of the terminology should be agreed by all parties.

4. All parties in the supply chain:

- to ensure that documented traceability is in place for all materials and consumables used in the manufacture of packaging and packaging components along the supply chain to the point of starting substances.

Subject to the above, the food manufacturer is responsible for compliance of the packaged food product with all applicable regulations.

F: Good practice guidance for the procurement of printed cartons:

The food manufacturer should identify the appropriate person(s) with responsibility for compliance of all the component parts of the overall package e.g. the printed carton plus any inner liner, trays, promotional inserts or externally applied labels. This will often be a technical or compliance manager within the supplier's organisation.

The food manufacturer should provide the printed carton manufacturer with comprehensive specification details of the food to be packed and the overall package design, where these are relevant to the potential for migration into the food. Please refer to paragraph E1 above.

The information should be provided to the printed carton supplier in writing.

The following is a non-exhaustive list of parameters / information which should be considered by the food manufacturer and provided to the carton supplier where appropriate:

a) Food product details:

Details of the food product specification **relevant to potential migration**, including for example, pack weight, details of product characteristics (such as liquid or solid) density and surface area, key ingredients, fat content, moisture content, area of food in contact with packaging etc. The countries in which the packaged food will be marketed should also be identified.

b) Other relevant information:

Details of any other information **relevant to potential migration**, such as filling temperature, storage temperature, shelf life and usage instructions. It is particularly important to check the suitability of inks (and adhesives), taking into account the heating / cooking temperature and time, where the product is intended to be heated / cooked in the printed packaging by the final consumer.

It would be appropriate to verify that clear cooking / heating instructions for consumers are included on the pack label. Note: it is necessary to give consideration to the risk of migration if shelf life and / or cooking / heating temperatures / times are exceeded by the consumer.

c) Details of overall pack design:

Details of the design of the pack as a whole. This is to inform the printed carton supplier of any other packaging materials which will be used in conjunction with the printed carton (for example "inner" plastic liners or trays), whether or not any functional barriers are present, and whether or not any other printed components (for example labels or inserts) could contribute to migration. Relevant details of how the printed carton will be used should also be included.

Where any functional barriers to migration are present, full details should be given and the evidence for considering the material as a migration barrier should be recorded. It should be noted that many commonly used plastic films are unlikely to function as a barrier to substances migrating from components of the printed carton.

All layers of multi-component materials should be separately considered, including any adhesives, printing inks, coatings, varnishes, labels or printed inserts. The thickness of layers should be specified. It should be borne in mind that the potential barrier properties of any given material may vary with both thickness and temperature.

Consideration should be given to possible migration from printed coding information (shelf life, best before, batch code or other variable information) applied by the food manufacturer by “non impact” (e.g. ink jet type) printing inks. In case of control of this risk, special inks for printing are available on the market, e.g printing inks for eggs.

Where other packaging components, such as liners, printed inserts and external labels are used, the food manufacturer should, as appropriate, also provide the information in parts a), b) and c) above to the suppliers of those components, and seek information from those suppliers on any potential migrating substances which might be present, including details of any specific migration limits (SMLs) under EU food plastics legislation (Regulation 10/2011/EU as amended), or any other restrictions (such as acceptable or tolerable daily intakes (ADIs or TDIs)). Note: such information may well be included as part of any Declaration of Compliance, provided by the relevant supplier.

Any such relevant information gathered from other component suppliers should be provided to the printed carton supplier as part of the information on the overall pack design.

Note: It is important that information provided by the food manufacturer to the printed carton manufacturer is accurate and that the printed carton supplier is informed of any subsequent changes, which might affect the potential for migration. (Note: It is recommended that a formal review of all existing pack formats be undertaken periodically to verify that undocumented changes have not occurred.)

The food manufacturer should ask the printed carton supplier to review all the information provided and to provide a written assurance of fitness for purpose of the printed carton, taking into account all the information provided by the food manufacturer.

Such an assurance should be signed by a senior, responsible person within the supplier's organisation (such as a technical or compliance manager or director) and should ideally include confirmation that:

- no changes to specification of the printed carton will be made without the prior consent of the purchaser;
- the printed carton supplied is fit for purpose and suitable for use in packing the food product as detailed, in conjunction with the pack design and other packaging components as detailed, and taking into account any other relevant information provided;
- that migration of substances from any components of the supplied printed carton into the food has been minimised and will not render the food non-compliant with Article 3 of Regulation (EC) No 1935/2004;
- the printed carton has been manufactured in accordance with Regulation (EC) No 2023/2006 on good manufacturing practice and is fully compliant with any other applicable EU law relating to food contact materials in force from time to time.

Note: The printed carton suppliers may provide some or all of this information as part of their “Declaration of Compliance”; however the food manufacturer should consider requesting additional assurances in the event that all the above requirements have not been

adequately covered. (Please see for example UK FSA Guidance on good practice for business documentation, which is referenced below.)

If necessary, the printed carton supplier should contact the food manufacturer / packer, to resolve any issues or discrepancies in relation to the specification of the food or packaging materials, prior to signing off on the fitness for purpose of the carton.

The food manufacturer should give consideration to any quality management standards held by the printed carton supplier e.g. ISO 9001, BRC IOP Packaging Standard or similar.

G: Good practice guidance for the manufacture of printed cartons:

With regard to the composition of components and other proprietary information (including lists of potential migrants) it is likely to be necessary to enter into confidentiality or non-disclosure agreements with either the printed packaging supplier and / or the ink or component manufacturer, in order to achieve release of information necessary to facilitate migration testing and / or risk assessment. Such information may be released either to independent third party laboratories carrying out migration testing, or to the food manufacturer / packer, in the latter case subject to agreement by the ink or component manufacturer. Subject to these confidentiality aspects, it should be possible to develop a list of potentially migrating components for the overall package, based on the information collectively identified by the food manufacturer and the printed carton supplier.

The printed carton suppliers should:

- be able to demonstrate awareness of potential migration from printed packaging into food and an understanding of the technical solutions needed to prevent such migration;
- be open and transparent with regard to the printing process(es) used to manufacture the printed article and the type(s), supplier(s), and trade name(s) of the inks and other components used;
- be able to demonstrate that the risk of migration of any components has been assessed and is below levels which would render the printed packaging non-compliant with Article 3 of Regulation (EC) No 1935/2004;
- in undertaking their risk assessment, be able to demonstrate compliance with any specific migration limits (SML) or maximum permitted quantities (QM) for particular substances even if not directly applicable to cardboard packaging (for example as laid down in current EU food contact plastics legislation). The printed carton supplier should take account of the European Printing Ink Association (EuPIA) public inventory list of packaging ink raw materials, Swiss legislation on packaging inks (which came into force from April 2010) and other industry best practice guidance;
- be able to demonstrate if required that the printed article has been produced in compliance with documented good manufacturing practice (GMP) guidance and should be willing to supply the food manufacturer with either a copy of or a reference to the GMP standard applied;
- be able to demonstrate that systems are in place for maintaining and recording traceability of batches of inks and other components and (through their ink / component suppliers) for traceability back up the supply chain to the starting substances from which the inks / components were manufactured;

- liaise with their ink / component suppliers to ensure that specifications have been established for substances used to manufacture inks (or other components of printed cartons) in order to minimise the risk that impurities present in inks / components might give rise to migration problems;
- be able to demonstrate that consideration has been given to minimising the transfer of ink constituents from the printed to the unprinted side of a printed article (“set-off”). Consideration should also be given to the handling, storage and transport of finished printed articles whilst still in the printer’s control. Controls should be in place by the printed carton supplier to protect finished articles from contamination, including for example from diesel or gas fork-lift truck fumes;
- be able to demonstrate that “change control” procedures are in place, such that risk assessments are revisited as necessary, whenever changes in specification of inks, adhesives or substrates etc. might change the likelihood of migration;
- be able to demonstrate that they have systems in place to be aware of emerging risks relating to packaging design / migration, and to proactively notify the food manufacturer where new risks are identified, in order that the risk assessment(s) can be reviewed.

The ink and other component suppliers should:

- be as open and transparent as possible with the printed carton supplier with regard to the specification and suitability of the ink or other relevant components with respect to migration;
- make available toxicological safety assessment data for any substances used in inks (or other components) identified as known or potential migrants.

Discrepancies or exceptions to any of the above should be identified by the printed carton supplier and carefully explored with the food manufacturer, and if necessary, the ink or other component supplier to ensure there is no risk of migration into food in breach of EU law and that the carton is fit for purpose.

Consideration should be given to whether the printed carton supplier has access to more than one printing press. In the light of this, the printed carton supplier should clarify whether the equipment used is a) dedicated to the use of food contact packaging (i.e. not used for printing other non-food articles) and b) uses only “low migration”^{*} printing inks. In cases where the equipment is not dedicated to producing food contact articles, or where a press is not dedicated to “low migration”^{*} inks, the printed carton supplier should explain what controls and systems are in place to prevent cross contamination between different inks / production runs and how such controls have been verified.

^{*} Please see definition on page 7 above

In order to minimise the risk of potential migration of photoinitiators or other components from under-cured UV printing inks, it is essential that the printed carton supplier ensures that UV lamps are correctly specified and in good working order. Procedures and records should therefore be put in place by the printed carton supplier covering the specification, cleaning, checking and replacement of UV lamps / reflectors and for validation of the curing process in relation to line speed (under-curing could potentially occur if lines are run at speeds greater than those used to specify the UV curing lamps).

It is important that the printed carton supplier is open and transparent with regard to any worst-case calculations used to assess the potential for migration and the need for migration testing or otherwise. N.B. worst case calculations could potentially be used to identify high risk food / packaging combinations which would require migration testing, or the use of “low migration” inks, or could alternatively be used by the printed carton supplier to discount the potential for any migration, which would render the packed food non compliant with Article 3 of Regulation (EC) No 1935/2004, and hence as a potential alternative to laboratory testing. The printed carton supplier should allow a margin of error to take account of potential [minor] inaccuracies in the information provided to it, such as [minor] variations in the thickness of any layers, food composition and failure to follow usage instructions.

Similarly, there should be openness and transparency with regard to any migration testing which has been carried out to demonstrate compliance. Where migration testing has been conducted, the printed carton supplier should be prepared to share full details including the results and the methodology / testing laboratory used. Ideally this should be in the form of a Certificate of Analysis from the testing laboratory (which itself should be appropriately accredited for the test being undertaken).

The printed carton supplier should be able to demonstrate that production according to the GMP Regulation 2023/2006 includes adequate hazard identification and process management to ensure that migration and “set-off” have been minimised.

Consideration should also be given to any activities sub-contracted by the printed carton supplier either routinely, or in exceptional cases.

H: Additional references:

Particular attention is drawn to the PIJITF “Explanatory Note on the assessment of migration potential from food packaging inks and its dependency on the packaging structure”. Please refer to the FoodDrinkEurope website:

http://www.fooddrinkeurope.eu/uploads/static_pages_documents/A1-PIJITF_Explanatory_Note_Migration_Potential.pdf

Further, more detailed information on good practice regarding the selection and use of appropriate inks for paper and board food packaging is available from the European Printing Ink Association (EuPIA):

<http://www.eupia.org/index.php?id=29>

The European Carton Makers Association (ECMA) issued a good manufacturing practice guide in December 2013:

<http://www.ecma.org/uploads/Bestanden/Publications/GMP/UK%20GMP%20%20Version%201.1%20%2016%2012%202013%20%20-%20FINAL.pdf>

In addition, please also see the British Printing Industries Federation (BPIF) “Good Manufacturing Practices for Carton board Based Packaging”, which is available from BPIF.

The reader is also recommended to refer to the BRC / IOP Global Standard for Packaging and Packaging Materials, which is available from BRC book store:

<http://www.brcbookshop.com/c/286/packaging-and-materials>

Attention is also drawn to the document “Specifications in the Food Packaging Chain”, published by BLL:

<https://www.bll.de/de/lebensmittel/verpackung>

Union Guidance on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food as regards information in the supply chain:

https://ec.europa.eu/food/sites/food/files/safety/docs/cs_fcm_plastic-guidance_201110_en.pdf

Finally, please also see the separate FoodDrinkEurope guidance on the use of recycled board for food contact use:

http://www.fooddrinkeurope.eu/uploads/publications_documents/FoodDrinkEurope_Guidelines_safe_use_of_paper_and_board_made_from_recycled_fibres.pdf