

Packaging and Packing Waste Regulation (PPWR) Statement



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The EU Packaging and Packaging Waste Regulation (PPWR) Regulation (EU) 2025/40 of 19 December 2024 is transforming how packaging is designed, labelled, and managed across the EU and Northern Ireland. It aims to introduce harmonized rules on recyclability, reuse, labelling, and reporting.

The regulations around PPWR are constantly changing and evolving, the information available below is as accurate as we can be as of the date of this statement.

It is our understanding that under these regulations, Castle Cartons Limited are not classed as the manufacturer, as we are not the company putting the goods on to the market in the EU, nor the brand owner and therefore we believe we do not have to comply with the regulations ourselves.

However, we understand that our customers, may need to be compliant of these regulations. Therefore we can state that all corrugated fibre board purchased by Castle Cartons Limited on behalf of our customers conform to the following standards.

Information in relation to Article 5 of PPWR – Requirements of Substances in Packaging

REACH (Registration, Evaluation and Authorisation of Chemicals):

The aim of REACH is to improve the protection of human health and the environment by better and earlier identification of properties of chemical substances.

Cellulose pulp, which is the main raw material for paper and board, is explicitly exempted from registration according to annex IV and annex V point 8 “substances occurring in nature, if they are not chemically modified”. Corrugated Board is constructed by using a vegetable starch-based adhesive to bond layers of paper, as there is no chemical reaction taking place, no new substances are formed. We at Castle Cartons are only affected as a downstream user of substances.

Under REACH paper and corrugated board are defined as ‘Articles’ whereas the focus of REACH is substances. Based on information from our board suppliers we are permitted to state that to the best of our knowledge the board we purchase does not contain the following

- In a concentration level above 0.1% substances identified in the current SVHC candidate List, referenced in the 5th November 2025 listing.
- SVHC substances listed in the authorization list in annex XIV of REACH regulation and last updated 1st November 2025
- Substances restricted by annex XVII to reach regulation and last updated 17th October 2025

None of the substances used in the paper and corrugate manufacturing process fulfils any of these conditions, and therefore they are exempted from REACH.

From the above statements, and separate assurances given us by our corrugated board suppliers, I am happy to assure you that all board produced by Castle Cartons Ltd meets the current requirements.

Notwithstanding all the statements above, it is possible that, due to the high waste content of unknown origin, particularly in the low-grade waste used in chip liner and waste based fluting, there might be very small quantities of contaminants in local concentrations.

RoHS 2 Directive 2011/65/EU amended by 2015/863/EU

RoHS 2 Directive of the European Parliament and of the Council of 8 June 2011, amended by Directive 2015/863/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment. RoHS 2 Directive applies to electrical and electronic equipment (EEE) set out in Annex I and does not apply to packaging.

Purity requirements listed in annex II of Directive 2011/65/EU concern hazardous substances including heavy metals and some organic compounds. The annex II is regularly updated by the authorities linked to the list of substances subject to authorizations published in the context of the 1907/2006/EC REACH regulation. The substances to consider as a priority are.

- Lead (0,1 %)
- Mercury (0,1 %)
- Cadmium (0,01 %)
- Hexavalent chromium (0,1 %)
- Polybrominated biphenyls (PBB) (0.1 %)
- Polybrominated diphenyl ethers (PBDE) (0.1 %)

And from July 2019

- Bis(2-ethylhexyl) phthalate (DEHP) (0.1 %)
- Butyl benzyl phthalate (BBP) (0.1 %)
- Dibutyl phthalate (DBP) (0.1 %)
- Di isobutyl phthalate (DIBP) (0.1 %)

The above, along with the organic substances listed in the RoHS 2 directive are not intentionally added by our board suppliers during any part of the production process, although the material can contain substances that are in the incoming raw material as traces or impurities.

Directive 94/62/EC on Packaging Waste – Heavy Metals – Corrugated Board

According to our material suppliers, Lead, Cadmium, Mercury and hexavalent Chromium have not been intentionally introduced during the manufacture of paper and do not exceed 100ppm by weight (EN13428), and the level of substances hazardous to the environment in the paper is less than 0.1% (EN13428) Our suppliers regularly analyse the heavy metals content in all of the paper and solid board grades they produce, and they state they are in line with article 11 of directive94/62/EC on heavy metals content

Heavy Metals - Ink

Our supplier states that in the manufacture of all products supplied by Siegwirk, no raw materials containing lead, cadmium, mercury and hexavalent chromium as intentionally added ingredients are used. All products supplied by our supplier are fully in line with state-of-the-art heavy metal traces control. Consequently, they allow compliance of the final packaging with the above-mentioned regulations.

Heavy Metals – Glue (where applied)

Our adhesive supplier acknowledges the requirement that the combined concentration of lead, cadmium, mercury, and hexavalent chromium in packaging and packaging components shall not exceed 100 mg/kg (100 ppm). Based on our suppliers formulation knowledge and raw material information, mercury, lead, cadmium, and hexavalent chromium are not intentionally added to the product during manufacture. Accordingly, the combined concentration of these heavy metals is expected to be below the regulatory limit of 100 mg/kg (100 ppm). This statement is based on available formulation and supplier information and reflects our current knowledge of the product composition.

Regulation (EU) 2024/3190 on Bisphenol A (BPA) and Other Bisphenols – Corrugated Board

This paragraph provides the position of all paper and solid board grades produced by our suppliers in relation to Regulation (EU) 2024/3190, on the use of Bisphenol A (BPA) and other bisphenols in materials and articles intended to come into contact with food. This regulation amends Regulation (EU) No 10/2011 and repeals Regulation (EU) 2018/213.

The use of BPA and its salts is prohibited in the manufacture of food-contact plastics, varnishes and coatings, printing inks, adhesives, ion-exchange resins, silicones, and rubber. In addition, residual BPA is not allowed in materials and objects intended to come into contact with food, even if manufactured using other bisphenols or their derivatives.

The material that Castle Cartons Limited purchase, and therefore the products that are manufactured comply with the specific requirements established for Bisphenol A (BPA) and its salts, as well as other hazardous bisphenols and their derivatives, in accordance with Regulation (EU) 2024/3190 of 19 December 2024.

Our suppliers do not use BPA or its salts in the manufacturing processes of their products intended for food contact. Therefore, the products we supply comply with the European legislation and meet the stringent requirements set forth in Regulation (EU) 2024/3190.

Bisphenol A (BPA) and Other Bisphenols - Ink

In the manufacture of all products supplied by Siegwirk for nutrition, pharma and hygiene (“NPH”) applications, substances or raw materials containing Bisphenol A (BPA, CAS-No. 80-05-7) and/or other hazardous bisphenols, including Bisphenol S (BPS, CAS-No. 80-09-1, Bisphenol F (BPF, CAS-No. 620-92-8), 2,2-bis(4'-hydroxyphenyl)-4-methylpentane (CAS-No. 6807-17-6) *and all their related resins, typical examples being* Bisphenol A epichlorohydrin resin (CASNo.25085-99-8), Bisphenol A epoxy diacrylate (CAS-No. 55818-57-0), BADGE (2,2-bis(4-hydroxyphenyl) propane bis(2,3-epoxypropyl) ether (CAS-No. 1675-54-3), BFDGE (bis (hydroxyphenyl) methane bis(2,3-epoxypropyl) ether (CAS-No. 39817-09-9) are not used as intentionally added ingredients on a worldwide basis.

Animal Derived Ingredients:

Paper: Animal derived ingredients are not introduced intentionally during our supplier's paper and solid board processes for technical purposes.

In the context of Good Manufacturing Practices (GMP) implementation implemented by our suppliers' mills, they have developed a policy intending to certify that all the chemicals that are used are compliant with food contact and environment regulations. One of the actions was the collection from all their suppliers of statements declaring that they do not use animal derived ingredients in the supplied additives. Although their products may contain the above substances that are in incoming raw materials as traces or impurities.

Glue: Our supplier states that Animal derived ingredients are not used in the glue manufacturing process.

Possible Contaminants:

Dioxin: Any bleaching on brown paper is Total Chlorine Free (TCF). Any bleaching on white paper is carried out using Elemental Chlorine Free (ECF) methods.

Heavy Metals: The BFPA (now the CPA) commissioned laboratory tests on a wide selection of fiberboard and paper products and concluded that levels of heavy metal contamination were extremely low, and well below the levels permitted by the CONEG standards and Article 11 of the EU Packaging and Packaging Waste Directive 94/62/EC (implemented in the U.K. in part III of the Packaging (Essential Requirements) Regulations 1998).

It is worth, however, raising the point that the increasing diversity of sources of recycled material, that comes with the encouragement to recycle, gives rise to a remote chance that spot contamination could occur. This is particularly true of waste based fluting medium and with double wall board, chip center liner, both of which are made from low grade waste.

Latex: No latex is used in the manufacture of any of the material we purchase.

GMOs: To the best of our knowledge, wheat starch of French origin is used as an adhesive, and no genetically modified wheat is grown in France.

Stockholm Convention – POPs regulation (EU) 2019/1021

All Persistent Organic Pollutants (POPs) listed in Regulation (EU) 2019/1021, as amended by Regulation (EU) 2025/1399 of 5 May 2025, and those listed in Annex A of the Stockholm Convention, are not intentionally used in the production of the papers that Castle Cartons purchase from our suppliers on behalf of our customers. The products we purchase may contain trace amounts of these substances as impurities from recycled fibres.

The latest substances added or updated in the POPs regulation and the Stockholm Convention are:

- Dechlorane Plus
- UV-328
- Methoxychlor
- PFHxS (Perfluoro hexane sulfonic acid), its salts and related substances
- PFOA (Perfluorooctanoic acid), its salts and related substances (with stricter limits)
- Chlorpyrifos
- Long-chain perfluoro carboxylic acids (LC-PFCA) and related compounds

PFAS Identification – Corrugated Board

Below are the contents of a statement from our main corrugate supplier Smurfit Westrock regarding PFAS.

Per- and polyfluoroalkyl fluoroalkyl substances (PFAS) are an extremely complex group, whose common feature is to have a carbon chain of variable length, on which all or a large part of the hydrogen atoms have been replaced by fluorine atoms. PFAS can be classified into two categories:

- **PFCA with a carboxylic function:** Perfluoroalkyl compounds containing a carboxylic function at the end of the carbon chain, like PFOA, PFNA
- **PFSA with a sulphonate function:** Perfluoroalkyl compounds containing a sulphonate function at the end of the carbon chain, like PFOS, PFHxS

PFAS substances are synthetically produced chemicals that repel water and oil. For this reason, they can be used as coatings for food paper and packaging as well as in numerous other products.

Among PFAS, the following ones are suspected to be carcinogenic and endocrine disruptor substances:

- PFOA (perfluoro octanoic acid, CAS No 335-67-1)
- PFNA (perfluoro nonanoic acid, CAS No 375-95-1)
- PFOS (perfluoro octane sulfonic acid, CAS No 1763-23-1)
- PFHxS (perfluoro hexane sulfonic acid, CAS No 355-46-4)

PFOA, PFNA from PFCA family, PFOS, PFHxS from PFSA family and other per- and polyfluoroalkyl compound are not intentionally added for technical purposes:

- In Smurfit Westrock paper and solid board mills during our paper and solid board process,
- In Smurfit Westrock corrugated plants apart from SK Siemco – France, for which situation must be checked with local sales contact.

Several analyses on targeted PFAS, did not show their presence in Smurfit Westrock papers and corrugated boards above detection limits.

Castle Cartons Limited, purchase all their corrugated material from Smurfit Westrock plants within the UK, and do not apply any coatings to the material, other than any water based ink for printing purposes.

PFAS Identification – Ink

Regarding PFAS our Ink supplier states,

The PPWR mandates that SOC (Substances of Concern) should be monitored for their negative impact on the reusability or recyclability of a packaging, as well as their risks to human health and the environment. The EU Commission plans to make a proposal for a Delegated Act based on input from the JRC (which is again based on the work of CEN) and has mandated the European Chemicals Agency (ECHA) to prepare a comprehensive report. This work is expected to be ready by September 2026. Therefore, due to the lack of a clear definition of SOC in the PPWR, Our Ink Supplier will not provide compliance information on SOC-related requests regarding their presence in printing inks and related products until further clarification is available.

Our ink supplier states that the raw materials used during the manufacture of their products are within the required limits on PFAS. They also state that PTFE (Polytetrafluoroethylene) is no longer used in any of their products, and packaging printed with their products are expected to meet the foreseen limit of 50 ppm, as stipulated by the PPWR.

PFAS Identification – Glue (where applied)

Based on current formulation knowledge and information provided by our raw material suppliers, our adhesive supplier does not knowingly use or intentionally add Per- and Polyfluoroalkyl Substances (PFAS) to its products.

This assessment includes substances addressed by Commission Delegated Regulation (EU) 2020/784, which amended Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) by adding perfluorooctanoic acid (PFOA), its salts, and related compounds to Annex I. Previously, restrictions relating to PFOA were established under Regulation (EC) No. 1907/2006 (REACH), Annex XVII, Entry 68.

Our adhesive supplier relies on compositional and regulatory information supplied by its raw material vendors to determine the presence or absence of PFAS substances. Based on this information, PFAS substances are not expected to be present in the products.

Our adhesive supplier does not routinely conduct analytical testing for PFAS or trace-level impurities unless specifically required. Consequently, the presence of unintended trace contaminants cannot be completely excluded.

Information in relation to Article 6 of PPWR – Recyclable Packaging

We expect our paper based products will be compliant under a conventional mill process, once the delegated act come in to force. Paper based packaging is well positioned in the regulatory environment, due to its proven recyclability at scale.

Recovery

All forms of recovery are key waste management options required by Directive 94/62/EC. Papers are recoverable by the three methods (recycling, energy recovery and organic recovery) listed in the Directive to satisfy the Essential Requirements. Our statement concerning all board grades intended for packaging produced by our main suppliers is as follows:

Recovery – Material Recycling:

All material grades intended for packaging supplied to Castle Cartons Limited, are recoverable by material recycling according to the requirements laid down in EN 13430.

Recovery – Energy Recovery:

The papers supplied to Castle Cartons Limited can be recovered in the form of energy. The energy recovery is that described in standard EN 13431.

Recovery – Biodegradability:

All corrugated board grades intended for packaging supplied to Castle Cartons Limited, can be recovered through composting and biodegradation according to EN 13432.

Recycled Content of Board:

Except for Kraft papers and various enhanced fluting, all papers purchased by Castle Cartons Limited are 100% recycled fibre. The Kraft grades contain up to approximately 30% recycled fibre, the actual proportion varying slightly from make to make, since the important factor is not to include a minimum proportion of recycled material but to maintain the performance of the paper. The percentage of recycled fibre in certain board grades is available, on request, in our Environmental Statement.

Information in relation to Article 7 of PPWR – Minimum Recycled Content in Plastic Packaging

This section is not applicable for paper / cardboard / corrugated packaging.

Information in relation to Article 8 of PPWR – Biobased feedstock in Plastic Packaging

This section is not applicable for paper / cardboard / corrugated packaging.

Information in relation to Article 9 of PPWR – Compostable Packaging

This section is not applicable for paper / cardboard / corrugated packaging.

Information in relation to Article 10 of PPWR – Packaging Minimization

Prevention by source reduction (EN 13428)

When designing new packaging components, Castle Cartons Limited are always mindful of the amount of material used, and the remaining space in any packaging. Where possible, these will be reduced to the minimum dependent on the strength of the material chosen. Where Castle Cartons retains the design responsibilities, regard will be made by source reduction. When the packer/filler provides the specification for the packaging, responsibility for minimisation at source cannot be delegated to Castle Cartons Limited.

Information in relation to Article 11 of PPWR – Reusable Packaging

These sections are not applicable for paper / cardboard / corrugated packaging.

Information in relation to Article 12 of PPWR – Labeling Packaging

What we know so far is that packaging will require a harmonized label that specifies the material composition, which is used to sort packaging waste. This label will take the form of a pictogram. The design of this labelling is yet to be specified from the research we have done.

Castle Cartons Limited has made every effort to ensure all the information in this document is accurate. If you require any further information regarding any of the above sections, please do not hesitate to contact us.

Yours sincerely

James Green
Managing Director