

Customer Information Note

Printing inks and associated varnishes for food contact materials and the concepts HACCP, VACCP, TACCP, the BRCGS and the IFS

EuPIA member companies have been committed for many years to the manufacture and supply of safe printing inks for food contact materials. These commitments include the principle of placing consumer safety first and the principle of implementing Good Manufacturing Practices. In the food industry, different concepts exist to address the risks related to the manufacturing, processing, packaging and distribution of food products.

- The HACCP concept (Hazard Analysis and Critical Control Point) is a system used to identify, evaluate and control significant hygiene risks when manufacturing, handling, processing, transport, stocking and selling food-related products. It is designed to control and prevent food safety risks during food production.
- The VACCP concept (Vulnerability Assessment Critical Control Point) is a system used to identify vulnerabilities motivated by economically driven food fraud (motivation is gain).
- The TACCP concept (Threat Assessment Critical Control Point) is a system similar to VACCP. However, threats are different to vulnerabilities as they are ideologically driven attacks such as sabotage, extortion or terrorism (motivation is harm).
- The BRCGS Global Standard Packaging Materials Issue 7 is a guideline for manufacturers of food packaging for own-brand products, which was created by the British Retail Consortium (BRC) in co-operation with the Institute of Packaging (IoP) and which has been widely adopted by the food industry. The standard mentions printing inks as one potential source of contamination of food by packaging materials.
- The IFS 8.0 (International Food Standard) lays down criteria for management systems of the food industry. It combines ISO standard 9001:2015, Good Manufacturing Practices (GMP) and the HACCP concept to ensure safety, quality, and legal compliance of food products.

These concepts do not apply as such to printing ink manufacturing, but it is worth noting that their key element is a company-based risk assessment. This assessment seeks to eliminate significant risk to the consumer arising from microbiological, physical and chemical contamination of the packaged foodstuff.

As part of the food packaging chain, the European ink manufacturers have defined specific requirements related to hygiene management and contamination risk assessment adapted to the printing ink industry which is not a direct supplier of the food industry.

Further information can be found in the GMP "Printing Inks for Food Contact Materials" issued by EuPIA, the European Printing Ink Association (see www.eupia.org).

With the implementation of the EuPIA GMP, EuPIA Members can assure for all products intended for food contact applications sold in Europe and all sites, where these products are manufactured that

- All products supplied are manufactured according to general industrial hygiene principles as defined in the EuPIA GMP. These include no eating, drinking or smoking in manufacturing areas, clean work areas, separate washing facilities and changing rooms, regular change of work clothes etc.
- The manufacturing sites are subject to ongoing rodent control measures. Any contamination arising from the presence of such animals may therefore be reasonably excluded. (It should be noted that ink and varnish raw materials and finished product storage and production areas are not especially attractive for insects, rodents or other pests).
- Contamination risk assessment has been performed according to the EuPIA GMP recommended method Failure Mode Effect Analysis (FMEA) or an alternative method and potential contamination risks are under control.

Concerning contamination risks, please also consider the following general comments:

Chemical risks

The likelihood of chemical contamination of printing inks with substances, which pose a severe hazard to human health is controlled via the EuPIA GMP and the EuPIA Charter on Raw Material Selection and Exclusion for Printing Inks and Related Products that many EuPIA member companies as signatories are adhering to. The signatories are listed on the EuPIA website.

Microbiological risks

A microbiological risk assessment has been performed in line with EuPIA GMP principles.

For solvent based inks and associated varnishes microbiological contamination is not possible due to the high organic solvent content which inhibits microbial growth / microbiological contamination.

For water-based inks and varnishes controlled additions of in-can, wet-state microbiological preservatives are used as an intentional part of the formulation to maintain the shelf-life of unopened packs.

During printing, both solvent and water-based systems are dried by the use of forced air and elevated temperatures, which further reduces the potential for microbiological contamination.

The UV-curable polymers used in UV inks and associated varnishes are not a suitable media for the growth of micro-organisms. In addition, the curing process involves exposure to UV light, itself used in other applications to destroy microbes.

The resins used in offset printing inks and associated varnishes do not provide a suitable medium for the growth of micro-organisms. The residual water content of such products is not significant.

Physical risks

All containers, mixing and print equipment must be maintained in such a state as to avoid external contamination immediately before and during printing.

Physical contamination (e.g. by metal, wood or glass fragments) is very unlikely, as product manufacture is typically carried out within closed systems. Furthermore, products are typically filtered as the last step immediately prior to being placed into the supply container (tins, pails, IBCs etc).

Food fraud / food defense

A documented risk assessment has been performed in accordance with the principles of the EuPIA Guideline on Good Manufacturing Practice (GMP) for Printing Inks applied to Food Contact Materials.

Based on this assessment, food fraud, malicious contamination, sabotage, and food defense risks related to printing inks are not considered prevalent scenarios. The EuPIA GMP framework establishes appropriate preventive measures and control mechanisms to mitigate such risks, including raw material qualification, supplier management, traceability, and controlled manufacturing processes.

Furthermore, potential concerns regarding malicious intervention are primarily associated with packed food products distributed in retail environments, which are accessible to the general public and therefore present a higher exposure risk. In contrast, printing inks are manufactured, handled, and distributed exclusively within industrial sites operating under controlled conditions

EuPIA PIFOOD, 19 June 2026