INK, HEART & SOUL

SIEGWERK

Customer Information on

Regulations in India

Siegwerk receives inquiries about the suitability of its printing inks for food packaging applications. The purpose of this statement letter is to clarify many of the issues that arise, including those concerning the regulatory requirements in India and the responsibilities of stakeholders in the packaging supply chain.

Background:

In India, the Food Safety and Standards Authority of India (FSSAI) is responsible for protecting and promoting public health through the regulation and supervision of food safety. FSSAI has been established under the Food Safety and Standards Act, 2006.

Food Safety and Standards (Packaging) Regulations, 2018

The standard prescribes that any material used for packaging, preparation, storing, wrapping, transportation and sale or service of food shall be of food grade quality ("Food grade" refers to materials made of substances which are safe and suitable for their intended use which shall not endanger human health and bring change in the composition of food or organoleptic characteristics). FSSAI mandates that the printing inks for use on food packages shall conform to IS 15495. IS 15495:2020 is the standard developed by the BIS (Bureau of Indian Standards) which needs to be followed in accordance with the above mentioned regulation.

Packaging Inks conformance to IS 15495:

The **Indian Standard IS 15495:2020** 'Printing Ink for food packaging – Code of practice' prescribes guidelines for printing inks for use on food packages. The standard differentiates between four categories of printing inks and gives guidance on the formulation of the respective inks:

1. **Printing inks on external (secondary/tertiary) food packaging**. They can be formulated freely, but must not contain substances from the exclusion list and must not contain toxic substances. In the case, that a functional barrier does not exist, bleeding dyes and colouring agents need to be avoided.

2. **Printing inks on Immediate Food Wrappings**. Those must be applied to the outside of the food wrapper, comply with the exclusion list and must not contain toxic substances. Inks are to be printed in such a manner as to avoid set-off. The final intended articles need to be manufactured such that under normal or foreseeable condition of use, they shall not transfer their constituents to the food in quantities, which may endanger human health, cause a deterioration in the organoleptic characteristics or an unacceptable change in the nature, substance and/or quality of the food. In the case, that a functional barrier does not exist, bleeding dyes and colouring agents need to be avoided.

3. **Printing inks for direct food contact.** They must be formulated only with food additives under the appropriate regulation of the Government of India. The final intended articles need to be manufactured such that under normal or foreseeable condition of use, they shall not transfer their constituents to the food in quantities, which may endanger human health, cause a deterioration in the organoleptic characteristics or an unacceptable change in the nature, substance and/or quality of the food. In the case, that a functional barrier does not exist, bleeding dyes and colouring agents need to be avoided.

4. **Printing inks for disposables** (e.g. paper plates, drinking straws or table napkins). Those inks must not contain substances from the exclusion list or those, which are otherwise known to be toxic. As far as possible and practicable, the printing ink manufacturers shall ensure that inks are formulated in such a way as to avoid migration of dyes or other colouring agents, liable to bleed under the expected conditions of use, onto the food.

Specified Requirements across the supply chain stakeholders:

- **Ink Manufacturer :**
    - Ink manufacturers are responsible to formulate packaging inks by using only raw materials other than those known to be toxic, carcinogenic, sensitizing or mutagenic, primarily governed by the exclusion list as per Annex A.
    - Ink manufacturers are expected to take all necessary precautions to meet the guidelines of the standard.
    - Ink manufacturers shall inform the converter and print buyers on the suitability of ink type towards the packages of food and the norms followed in formulations as per the requirement.
    - Ink manufacturer needs to declare the MSDS for the Ink formulations.
    - The sum of concentration levels of lead, cadmium, mercury and chromium (VI) shall not exceed 100 ppm for printing inks.
- **Printer / Converter :**
    - The printer and converter is finally responsible for manufacturing and storage of the food packages in such a manner by which all preventable transfer of material from the ink or coating to the food content is avoided, even if such transfer is unobjectionable on the grounds of health, odor and flavor.
    - The printer needs to ensure that the storage environment should be free from potential volatile contaminants, which could adversely affect the organoleptic characteristics of the food.

- For immediate food wrappings and direct contact applications the final intended articles needs to be manufactured in such a way, that under normal or foreseeable condition of use, they shall not transfer their constituents to the food in quantities, which may endanger the human health, cause a deterioration in the organoleptic characteristics or an unacceptable change in the nature, substance and/or quality of the food.

- For immediate food wrappings and direct contact applications the printer needs to establish appropriate controls to avoid set-off in the printing process.

- The converter needs to perform adequate analysis for the specific application in context of validating the bleeding capacity of dyes and pigments used in the inks.

- **Print Buyer/Brand Owner :**

  - Print Buyers need to design the packaging with the restriction of printing in mind.

  - For immediate food wrappings and direct contact applications the final intended articles needs to be manufactured in such a way, that under normal or foreseeable condition of use, they shall not transfer their constituents to the food in quantities, which may endanger the human health, cause a deterioration in the organoleptic characteristics or an unacceptable change in the nature, substance and/or quality of the food.

  - Relationship between the press speed and the curing/drying power needs to be fully understood to ensure that an adequate curing/drying takes place.

  - For immediate wrappers, the print buyer needs to recommend substrates with sufficiently low permeability to prevent migration.

The information in this document reflects Siegwerk's policy and commitments. This statement is valid without signature.