

Customer Guidance Note for using ink Statements of Composition when considering compliance of food packaging

This guidance note concerns Packaging Inks which are applied on the non-food contact surface of food packaging. It is intended to help printing converters and end users assess the compliance of printed packaging using the information provided by the ink supplier.

Regulation (EC) No 1935/2004 requires that food contact materials and articles in their finished state must not transfer any components to the packed foodstuff in quantities which could endanger human health, or bring about an unacceptable change in the composition or deterioration in organoleptic properties.

Packaging inks may be one source of substances with the potential to migrate. To allow the assessment of the levels of potential migration from printed food packaging, EuPIA members may supply converters with a Statement of Composition (SOC) for a printing ink. This SOC will list those substances with the potential to migrate along with the applicable migration limits and the amount of that substance in the print. The migration limits for a substance may come from the Plastics Regulation (EU) No 10/2011, from the Swiss Ordinance SR 817.023.21 or from another recognised authority such as an EFSA opinion.

In order to determine compliance for a specific printed food packaging the converter will need to recalculate the amounts of potentially migrating substance based on their actual usage of the printing ink. This will include:

1. The applied ink dry coating weight.
2. The % coverage of the printing ink.
3. The actual packaging surface area and packaged food weight¹.
4. How well the converter has dried / cured the ink².
5. Press side additions introduced by the converter

The converter then needs to collate this data together with data of potentially migrating substances provided by suppliers for other components of the food packaging (example plastic films, adhesives, coatings).

For each potentially migrating substance, the calculations may show that even if all of the potentially migrating substance were to migrate into the food that this would still be below the specific migration limit. If that is the case then for this substance no further action is required. If the calculations show that the migration limit would be exceeded if all of the substance migrated into the food, then migration testing would be recommended to

¹ Historical practice has been to use the EU model of 1 Kg of food wrapped in 0.06 m² of packaging. However actual packaging geometries may vary significantly from this model. The regulations require that the actual packaging geometry is considered.

² The extent to which the converter has dried a water-based or solvent-based ink will have a dramatic effect on the retained volatile levels. The extent to which the converter has cured an energy curing ink will similarly affect the amount of residual monomers. The converter should use the measured retained levels in any calculation. This is to a large extent under converter control.

measure the extent of migration. The measured value should be compared to the applicable migration limit to determine compliance.

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The following schematic represents the suggested process flow involved in risk assessing the migration of substances from inks into food from packaging.

