Mineralöl-Migration in Verpackungen

Zu aktuellen Stellungnahmen des Bundesinstituts für Risikobewertung (BfR) wonach in manchen trockenen Lebensmitteln Mineralöl-Rückstände gefunden wurden, die aus der Verpackung migrierten, möchte Flint Group die folgenden Erläuterungen und Empfehlungen abgeben.

Karton für Lebensmittelverpackungen wird oft aus Altpapier hergestellt, das häufig auch Zeitungen enthält. . Die meisten üblicherweise eingesetzten Zeitungsdruckfarben enthalten Mineralöl, das beim Recycling-Prozeß nicht entfernt wird und deshalb in Lebensmittelverpackungen aus Karton festzustellen ist.

Im Anhang zu diesem Brief finden Sie zwei Stellungnahmen der EuPIA (European Printing Ink Association – europäischer Druckfarbenverband) zum Thema Mineralöl in Verpackungen, die auch die Meinung der Flint Group wiedergeben.

Zur Umsetzung der Empfehlung der Wirtschaftsverbände Papierverarbeitung WPV (siehe Anlage: EuPIA-Beitrag zur Mineralölreduzierung von Verpackungen), nur mineralölfreie Farben für Verpackungen einzusetzen, sind folgende unserer Bogenoffset-Produkte geeignet

- Für Lebensmittel-Verpackungen – Produktgruppe *Novasens*
- Für alle anderen Verpackungen - alle unsere Farbskalen mit dem Zusatz *BIO* in der Produktbezeichnung,
  unsere Schmuckfarbenserien Novavit EASYMIX PANTONE BIO,
  Novavit ECOMIX PANTONE BIO und Novavit HKS

Vertreter der Flint Group arbeiten aktiv in den Gremien der EuPIA mit und beantworten Ihre Fragen zu diesem Themenkreis gerne.

Für Hilfe bei der Auswahl geeigneter Farbtypen und für jegliche weitere Unterstützung sprechen Sie bitte Ihren örtlichen Vertriebs-Vertreter oder den technischen Service an.

Weitere nützliche Links:

http://www.ecma.org/files_content/position%20paper/Position%20note%2024%2009%202010%20FV.pdf

http://www.eupia.org/EPUB/easnet.dll/ExecReq/Page?eas:template_im=10008E&eas:dat_im=05048E

http://www.flintgrp.com

Initial Response: Mineral Oils in Offset Printing Inks

The European Printing Ink Association (EuPIA) offers the following comments on statements made by the Confederation of European Paper Industries (CEPI):

EuPIA member companies are committed to strictly follow the EuPIA Exclusion List for Printing Inks and Related Products. This commitment covers all types of printing inks for all types of printing processes. In particular, substances may not be used in printing inks which are classified as carcinogenic, mutagenic, or toxic for reproduction categories 1 and 2 according to the Dangerous Substances Directive 67/548/EEC.

The rules apply – as a matter of principle – also for the mineral oils used in offset printing inks. Official test methods are used to prove that there is no need for classification as carcinogenic (e.g. note L to Annex 1 of Directive 67/548/EEC: method IP 346 "Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method", Institute of Petroleum, London). Documentation provided by the mineral oil suppliers demonstrates that the products used by EuPIA members are not classified as carcinogenic.

By selecting the raw materials according to the criteria detailed in the Exclusion list, it is ensured that there is no risk for the consumer when using a graphic article such as newspapers or magazines.

This does not mean, however, that printing inks comply with food law requirements, and therefore must not be found in food by whatever means of transfer.

In fact, with very few exceptions, printing inks intended for graphic, general packaging and food packaging applications are not designed to come into direct contact with food, and, therefore, the raw materials used in printing inks do not generally meet food standards. In addition, there is evidence for at least 20 years that mineral oils and other substances can be transferred from recycled paper and board to foodstuffs. It is for these reasons that the printing ink industry has always advised against the use of recycled paper and board for food packaging, unless adequate measures have been taken to ensure that substance transfer is avoided.

Comprehensive information on ingredients of printing inks is publicly available for a long time (e.g. monographs such as the "The Printing Ink Manual" (since 1961) or "Druckereichemikalien" (since 1991)).
Printers are provided with information on relevant ink ingredients in the Safety Data Sheets.

CEPI intended to start a project aimed at identifying possible risks from undesired substance transfer from food packaging made from recycled paper and board into foodstuffs. In order to assist CEPI in this undertaking, EuPIA provided CEPI with the monograph "Druckereichemikalien" and further update information on substances used in printing inks.

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Therefore, since early July 2009, CEPI has comprehensive knowledge about the substances used in printing inks.

Information on “Substances of Very High Concern” (i.e. substances listed on the “candidate list” according to Art. 59(1) of the REACH Regulation (EC) No 1907/2006) must be provided in the safety data sheet if the substance is present above 0.1 % by weight.
None of the substances currently on the “candidate list” appear to be used in printing inks or related products.
One category of substances of the “candidate list”, namely CMR substances of categories 1 and 2, is already per se excluded from use in printing inks through the EuPIA Exclusion List.
However, at this point in time and although not very likely, it cannot be excluded that in future substances with characteristics according to Art 57 (d) – (f) may be added to the “candidate list”, which may be used in printing inks as well.

It should be noted that the commitment to comply with the EuPIA Exclusion list is relevant for EuPIA members only, and does not prevent that printed materials imported from outside the EU may be manufactured with printing inks that are not compliant with the EuPIA Exclusion List.

EuPIA, 19 February 2010

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Printing ink industry contribution to German paper, paper converting and food industry initiatives to reduce mineral oil in paper and board packaging

Recent monitoring of packaging on the German market has identified mineral oil contamination in a range of packaged foods. Mineral oils are widely used, and end up in foodstuffs by various routes which are being explored.

Food packaging has been identified as one source of the contamination in the foodstuffs. For instance, mineral oil can migrate from recycled paper and board, and from mineral oil-based print on the non-food contact side of packaging.

The German Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) require the food packaging chain to take measures such that levels of mineral oil in foodstuffs are reduced.

In this respect, the trade associations representing the German paper converting industries (WPV) have recommended to their members to only use mineral oil-free printing inks on paper and board packaging. Additionally, the German Federation for Food Law and Food Science (BLL) has recommended to the food industry the use of specific printing inks:

- **for food packaging**: printing ink systems, which have been optimized for migration
- **for all other packaging**: mineral oil free printing inks

To enable printers and convertors to meet their respective industry association's commitment to the BMELV, EuPIA identifies the following packaging ink options:

- **Sheetfed offset printing**
  Both types of offset inks mentioned below are formulated without mineral oils[1] and are based on vegetable oils, vegetable oil esters or, in case of UV curable sheetfed inks, are based on synthetic reactive diluents and resins.

[1] For the purposes of this initiative, EuPIA defines mineral oil as follows: Mineral oils are liquids produced by refining of crude oil. They consist of complex mixtures of hydrocarbon molecules of different size (10 to 30 carbon atoms) in which the carbon chains are linear, branched and/or cyclic. Types of mineral oils may be characterised by their content of paraffinic, naphthenic and/or aromatic structures. Carcinogenic mineral oils are not used by EuPIA members.

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- **Low migration inks for food packaging**
  These inks are optimized not only with regard to the lowest possible content of mineral oil, but also any unevaluated migratory substances. As raw materials are specially selected, the levels of trace impurities are significantly lower compared with standard inks.
  For more information, please consult the EuPIA customer information note regarding the use of sheetfed offset inks and varnishes for the manufacture of food packaging (www.eupia.org).

- **Conventional mineral oil free printing inks for all other packaging**
  Generally the content of mineral oils originating from the raw materials is no more than 1%.

- **Flexographic printing**

  - Flexographic inks for paper and board are usually water based or UV curable, and are therefore free of mineral oils.
  - For food packaging applications, specially formulated flexographic inks are recommended.

EuPIA, 2010-10-14

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