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European paper industry calls for caution on mineral oil risk

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By Liz Newmark & Stephen Clapp

Scare stories abounding in the European media over migration of mineral oils into foods packaged in recycled cardboard are just that -- a scare, Jori Ringman of the European Confederation of Paper Industries (CEPI) told our sister publication *European Environment & Packaging Law* this week.

The German Federal Risk Assessment Authority (BfR), European Food Safety Authority (EFSA) and food packaging companies are investigating the situation highlighted in media articles last week and looking for solutions (see FCN March 11, Page 14). However an opinion from EFSA, which provides food safety advice to the European Commission, isn't expected until September.

"There is no evidence to indicate that there is a risk, says Ringman, CEPI director of recycling, product and environment. "The UK Food Standards Agency concluded in studies carried out in 2002 and 2003 that there is no risk, and we would only assume that the situation has improved since then. We take this very seriously, however, as we said in our statement on the issue, and are investigating ways to phase out materials containing mineral oils."

The March 8 statement emphasizes that the industry is in "active dialogue with national and European food safety authorities as well as with other key actors in the chain such as ink producers and publishers in the aim of solving the issue".

According to CEPI, no toxicological studies on the effects of human exposure to traces of mineral oil actually exist, although recent studies on mineral oil hydrocarbons found in food have raised questions about consumer safety. The studies say that traces of mineral oil in the food arise by migration from the inks on the printed surface of the packaging and in recycled fiber, principally newspapers, used to produce packaging.

"In the absence of clear regulatory guidance, the paper and board sector is being proactive, in particular by investigating the possibilities of phasing out materials containing mineral oil in their production processes. Eliminating the root cause is the most sustainable option," CEPI says, adding:

"This can be done by phasing out the use of mineral oil-based printing inks and chemicals in both packaging and printed papers. Such technology changes will take time. As a start, packaging companies are making commitments to use only mineral oil free inks for printing their packaging and, wherever possible, using recovered paper types with minimal mineral oil content."

Cancer risk?

Exposure to mineral oils, which come from printing inks, has been linked to inflammation of internal organs and cancer. Government scientists in Switzerland found mineral oils between 10 and 100 times above the safe limit in pasta, rice and cereals sold in recycled cardboard cartons.

The BBC reported last week that cereal manufacturers Weetabix, Kellogg's and Jordans have all taken steps to change to recycled packaging that doesn't contain inks and chemicals used in newspaper production due to the migration concerns.

Weetabix uses 100% recycled board and is looking at recycled packaging that does not contain recycled newspaper. Kellogg's is working with suppliers on new packaging that will contain "significantly lower levels of mineral oil" and Jordans has stopped using recycled cardboard altogether.

The research that sparked the debate was led by Koni Grob at the government-run food safety laboratory in Zurich. In one study published last year he found that around 75% of 119 food products from a German store contained mineral oils. Most exceeded the agreed safe limit set by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) for mineral oil saturated hydrocarbons of 0.6 mg per kg by more 10 ten times.

However, he told the BBC earlier this month: "We calculated that in the long run they would probably exceed the limit 50 times on average and many will exceed it several hundred times."

Grob added that even switching to virgin cardboard would not eliminate the risk from mineral oils entirely, as the food cartons themselves are stored and transported in larger corrugated cardboard boxes also made from recycled newspapers, and also a source of contamination.

Grob however emphasised that consumers would have to be exposed to contaminated foods over many years for their health to be at risk.

The UK Food and Drink Federation, in line with the views of CEPI and the FSA, said that the Swiss study was "a good starting point for further investigations," but not enough to justify stopping using recycled cardboard.

Packaging scare fails to resonate in U.S.

Packaging experts in the United States interviewed by Food Chemical News also are dismissive of the mineral oil scare in Europe. George Misko, a partner in the Washington, D.C., office of the law firm Keller & Heckman who specializes in packaging, comments, "How much of a problem it is, is difficult to say ... I haven't heard anything from FDA; maybe it's still being sorted out. Recycled paper has been in packaging forever. A lot depends on what mineral oils [are getting into food]."

Asked for agency comment on the risks from mineral oil, an FDA spokesman sent FCN the following e-mail: "Pulp from reclaimed fiber (recycled paper) is permitted in food packaging under 21 CFR 176.260. However, such pulp must comply with all other applicable food additive regulations for paper and paperboard. It is not permitted to contain any substances that are expected to migrate to food, other than those that have been authorized for use in food contact paper. In addition, recyclers can and do come to FDA to gain advice on whether their paper recycling process meets the requirements of 21 CFR 176.260.

"Mineral oils (odorless light petroleum hydrocarbons) can be used in foods and in food contact materials provided they are of appropriate food grade for those uses. An example of food grade specifications for mineral oils would be those listed in the Food Chemicals Codex. One result of meeting such specifications would be to limit the aromatic fraction which can be present in mineral oil. It is that fraction which is of particular concern regarding the European products."

Clair Hicks, a University of Kentucky food scientist recommended to FCN by the Institute of Food Technologists, comments that in the United States there is usually polymer between paper and food in food packaging, adding, "Food on paperboard is not all that common."

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