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Flexible packaging – part of the solution for a resource efficient society

There are a number of critical issues that we must address as an association if we are to create an authoritative single voice for the flexible packaging industry.

Essentially we must make our voice heard by government and European legislative authorities on issues such as food contact and sustainability, alongside good manufacturing practice. We must establish a common platform to present an industry wide philosophy that encompasses our member companies, their customers, retailers and consumers to help legislators develop efficient and successful policies on all these issues.

> *The benefits of flexible packaging concepts are numerous and it is vital that these are understood by legislators and the complete supply chain.*

To flexible packaging manufacturers these advantages are obvious but we must ensure that the message we give to the world produces a true understanding of the environmental benefits of flexible solutions.

We all know that the impact of flexible packaging on the environment is negligible when compared with food production, processing and consumer behaviour. The trick will be to educate legislators and users to the fact that flexible packaging with its excellent product to packaging ratio is probably the most resource efficient option available supporting sustainability across the supply chain, while also delivering excellent functionality.

Communication along the supply chain is an essential ingredient if we are to create a deeper understanding of our efforts to achieve continuous improvement in Good Manufacturing Practice (GMP) including sustainability, technical development and legislation. To help establish a true understanding of the issues involved, FPE is engaged in a series of Round Tables across the complete European food supply chain.

> *The key message is packaging must not be viewed in isolation, and that flexible packaging is a key driver to make sustainable consumption possible. Flexible packaging is part of the solution for a resource efficient society.*

I look forward with FPE's vice-chairman Gérard Blatrix, Vice-President and General Manager, Amcor Flexibles, to pro-actively driving the flexible packaging sector forward to increasing success over the next decade.

Jan Homan
Chairman
Flexible Packaging Europe

FPE ELECTION RESULTS

Jan Homan is the newly-elected Chairman of Flexible Packaging Europe and CEO of Constantia Flexibles. Jan was also appointed a Vice-President of EAFA (European Aluminium Foil Association).

Gérard Blatrix, Vice-President and General Manager, Amcor Flexibles, was re-elected as Vice-Chairman of FPE.

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News from Brussels

John Dixon

Plastics Implementation Measure (PIM)

This continues to progress and can be expected to be adopted and published by the end of the year. It will come into force in all member states almost immediately. However, existing packaging products that comply with 2002/72 will remain legal for another two years. In that period, converters will only have to issue new Declarations of Compliance (DoC) for new products.

Changes to the text of the PIM continue to be made, many as a result of representations from FPE and other industry bodies. For example:

- The DoC will no longer be required to "accompany" the product but must be "made available".
- There are now more reasonable migration conditions.
- When substances listed for plastics are used as components of coatings, inks and adhesives, they must meet any Specific Migration Limits. However, they do not have to comply with any other restrictions and specifications which apply to their use for plastics.

A Technical Working Group has been set up to draft a Technical Guidance Document. FPE is participating in this group together with representatives from other industries, the Commission and enforcement authorities. A key task is to write a chapter on the DoC to clarify exactly what is required. For example, there is a requirement to provide "adequate information … to allow the downstream business operators to ensure compliance" – here the exact meaning of "adequate" needs to be defined. What the business operator needs to provide in the DoC depends on:

- The type of product being delivered to the direct customer – is it a chemical substance, a resin, a film or a packed product?
- The role of the business operator and their position in the supply chain – the obligations of a resin manufacturer will be different from those of a packaging converter.

The aim is for this Technical Guidance Document to be ready before the PIM is published so that it can be used to help interpret the measure. The legal status of the Technical Guidance Document is not yet clear.

Packaging Ink Joint Industry Task Force

The PIJITF, of which FPE is an active member, is taking the lead in addressing the demands of the Swiss Packaging Ordinance (SR 817.023.21) which came into force on April 1, 2010. This gives lists of the substances permitted for use in inks. However, there are numerous omissions and, while the lists will be revised and corrected in due course, there is a short term problem.

Fundamentally, the legislation states that substances that are not fully evaluated must be non-detectable, with a detection limit of ≤10 ppb. The use of such a standard limit, without the possibility of carrying out a risk assessment which takes account of exposure, the cost of demonstrating compliance and, in many cases, the lack of appropriate analytical methods, present the industry with formidable problems.

The Task Force has made representations to the Swiss authorities on these concerns but the response so far has been only to clarify the legislation, not to modify it. As things stand, converters will not be able to demonstrate compliance for many of their products.

Council of Europe Resolution on Metals and Alloys in Contact with Food

An Open Consultation meeting was held in March 2010, to which the European Aluminium Association contributed. The main conclusions included:

- There should be a Specific Release Limit (SRL) for metals and alloys in contact with food, as opposed to the Specific Migration Limit for plastics. The limit for aluminium will remain at 1mg/kg unless analytical data become available that would justify another value.
- There is a need for experimental data on the release from pure alloys, in order to demonstrate the feasibility of compliance with the limit.
- There is a need for co-operation in the development of analytical standards and, in particular, an alternative to acetic acid as a simulant.

Nanoparticles

There have been no further developments in European regulation on nanoparticles since the last newsletter but, in December 2009, the German Federal Institute for Risk Assessment (BfR) recommended that "manufacturers avoid the use of nanoscale silver compounds in foods and everyday products". They have now extended this to advice against using such substances in all consumer products, saying that more data is required before a conclusive risk assessment can be made.

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Paper and Board **Food Contact Guidelines**

CEFIC (suppliers of chemicals), CEPI (paper and board manufacturers), CITPA (paper and board converters) and FPE have developed and published an "Industry Guideline for the Compliance of Paper & Board Materials and Articles for Food Contact".

Regulation 1935/2004 provides for the adoption of specific measures relating to particular groups of food contact materials or articles. However, no such specific measures have been introduced for paper and board. To demonstrate safety and legality, companies have often needed to rely on compliance with the national regulations, such as the Recommendation XXXVI of the German Federal Institute for Risk Assessment (BfR). The new guidelines are based largely on, and are compatible with, this recommendation which lays down the substances that are permitted to be used as raw materials, production aids and refining agents. In addition, the Guidelines:

- Allow component substances that are listed in the Dutch "Warenwet" or are approved by the US FDA.
- Give specific requirements for the use of recovered paper as a raw material.
- Set maximum limits for specific substances in the paper or board, together with recommended test methods and advice on test frequency.
- Set out requirements for the use of paper and board within multilayer structures.
- Show Compliance Assessment Schemes for papermaking and for converting operations.
- Give the requirements for the declaration of compliance.

Overall, these Guidelines provide a more comprehensive approach to demonstrating the safety of paper-based packaging materials and hence compliance with 1935/2004. While they currently have no legal force, the paper industry hopes that they will form the basis of future specific legislation.

Substances in the news

1. Bisphenol A (BPA)

Since the last edition of the Newsletter, research papers have continued to be published which link BPA exposure to a variety of effects, including increased risks of breast cancer and severe intestinal inflammation, susceptibility to asthma and effects on male hormone levels.

Many of these studies claim links between exposure to low levels of BPA in the embryo or infancy and health issues in later life. They question the validity of the conventional toxicological methods which have been used to set current exposure limits.

In January 2010, the US Food and Drug Administration published a much delayed update on the substance. While it concludes that the present low exposure levels are safe when using conventional toxicity tests, they now have "some concern" that there may be more subtle effects and are carrying out in-depth studies to investigate these further. Meanwhile, they support "reasonable steps" to cut exposure and develop alternatives.

On this side of the Atlantic, The European Food Safety Authority (EFSA) held a summit of scientific experts in March which reviewed the most recent research. They reported to the commission in July this year.

However, there has been some action at national level. In March, Denmark introduced a temporary ban on BPA in all food contact materials for children aged 0 – 3. In April, the French Food Safety Agency (AFSSA) recommended that consumers be alerted to its presence in packaging by a system of "systematic labelling". This was followed by the National Assembly banning baby bottles based on BPA. The German Federal Environment Agency (UBA) has called for a "precautionary approach" and for alternative substances to be used.

But, it is the recommendations of the BfR, rather than those of the UBA, which have legal force. And, in contrast, the BfR concluded, in October 2009, that normal use of BPA for baby bottles does not present a health risk.

This debate is starting to be conducted on two levels. The immediate issue is the status of BPA itself. Even if the EFSA report supports the current use of BPA, the political pressure to ban it may continue. Industry is starting to respond to this market demand by developing alternative BPA-free lacquer systems. Meanwhile, the flexible packaging industry should be prepared for continuing questions on whether their products contain this substance and if so, in what amounts.

At a more fundamental level, some sections of the scientific community are using the BPA debate to raise doubts about the methods used currently by regulatory agencies to evaluate the safety of chemicals. The agencies will have to decide whether to respond to such criticism or to continue to defend their existing methods.

In the first case, they may tighten their procedures, demanding more research on the long-term and more subtle effects of substances at low doses. This would result in increased costs to industry and delays in approvals. Alternatively, we face the prospect of continued questioning of the decisions made by these authorities and a potential loss of public confidence in them. This could lead to an increase in the number of cases in which a customer demands that we go "beyond the law" by eliminating an individual substance, despite it being officially approved.

2. Antimony in Fruit Juices

Several national newspapers have run articles based on a recent research paper which reported levels of antimony in bottled fruit juices that are above the EU drinking water limits. It

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was suggested that the substance may have leached from the polyester bottles used to pack the juice. While it is true that antimony trioxide can be used in the manufacture of polyester, the researchers also found antimony in juices packed in liquid cartons – with no polyester content – making it equally likely that antimony was present prior to packaging. In addition, in quoting only the drinking water limits, they ignored the fact that there is an SML for antimony, which takes into account the exposure levels from packaged goods; this limit was not exceeded.

This is a good example of the way that scares can arise. While perhaps not directly affecting producers of flexible packaging, whose use of polyester in direct contact with food is limited, we must be prepared for questions on the subject.

3. Melamine

There now seems a general understanding that the high levels of melamine, which resulted from deliberate adulteration of food, are on a completely different scale from the levels which could arise by migration from food contact materials. All the same, EFSA has reassessed the toxicological data and lowered the Tolerable Daily Intake for the chemical from 0.5 to 0.2mg/kg of bodyweight per day.

In due course, this can be expected to result in a corresponding reduction in the Specific Migration Limit (SML), currently set at 30mg/kg. Our understanding is that compliance, with even a reduced SML, should not present problems to those converters using melamine-based lacquers.

Research activity

John Dixon

FACET

The FACET project continues to move ahead. Over the last six months, effort has concentrated on collecting quantitative data to describe:

- The foods packed.
- The structures used for each food.
- The material types and thicknesses that are used to make each structure.

On the one hand, this data will link with food consumption figures and, on the other hand, will link with the concentrations of chemical substances which may be found in the materials. Thus the exposure of the consumer to the chemical substances will be modelled.

FPE took a major role in the initial stages of agreeing common codes for foods and packaging materials. Earlier this year, a questionnaire was distributed to members to record how much of each structure they supplied for packing each food type. The response was impressive, with more than 20 companies returning completed spreadsheets. The effort required by individual members was considerable and both FPE and the FACET project are extremely grateful for all these contributions.

Returns have been collated by FPE's consultant and are "anonymous". Should anyone had doubts about the complexity of our industry, it may be worth mentioning that we have recorded over 1,000 different structures – and that does not include variations in material thickness!

The next challenge is to incorporate such a complex set of data into the overall project software. FPE have already provided preliminary figures with which the developers can work.

FPE was one of the first converting associations to collect and collate its data. Others may not be ready for some time. At the moment this is not critical for the overall time scale of the project and it does give an opportunity for FPE to produce a second edition of its data. We would therefore encourage any companies that have not yet completed the spreadsheet, to think again and make a contribution.

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