Food Packaging Regulations in Australia and New Zealand

Australia and New Zealand regulate food contact substances through a single bi-national agency - Food Standards Australia New Zealand (FSANZ) - under the joint Australia New Zealand Food Standards Code (the Code). The Code, first published in 2000 and revised March 1, 2016,[1] contains four chapters: 1) Introduction and standards that apply to all foods; 2) Food standards; 3) Food safety standards; and 4) Primary production standards. Chapters 3 and 4 apply only in Australia.

Although FSANZ develops and updates the Code, it is enforced in Australia by state and territory authorities; in New Zealand, by the Ministry for Primary Industries and public health units. For imported food, Australia’s Department of Agriculture and Water Resources enforces the Code’s provisions. Given the potential for checkered implementation, consistency in the Code’s enforcement is ensured by the Implementation Subcommittee for Food Regulation (ISFR).[2]

As discussed below, FSANZ has initiated a review of its food packaging oversight to determine whether the existing regulatory framework for managing risk from the migration of chemicals from packaging to food is adequate. This effort remains ongoing.

Food Contact Substances under the Code

The degree of regulation of food contact substances in Australia and New Zealand is tied to the intended function of the substance that contacts food. The Code distinguishes between “food additive,” “processing aid,” and “package”:

- Food additives are defined as substances added to food to perform one or more technological functions in the finished food. (See Standard 1.1.2-11.)

- Processing aids include substances used to perform a technical purpose during food processing, but not in the finished food. (See Standard 1.1.2-13.)

- A package is “any container or wrapper in or by which food for sale is wholly or partly encased, covered, enclosed, contained or packaged,” including primary and secondary packaging. The definition of “package” excludes bulk cargo containers, pallet overwrap, crates and packages that do not obscure food labels, transportation vehicles, hampers (e.g., decorative basket or box), containers and wrappers for food served in prisons, hospitals, and medical institutions, and food containers that serve a medical purpose that are used in institutional settings. (See Standard 1.1.2.)

Food additives, which are not further discussed herein, are subject to more stringent controls and must be approved prior to use. As discussed in further detail below, under the Code, processing aids also must be the subject of premarket clearance for their intended use in food. For packages, however, the Code is general in nature, and does not specify permitted materials that may be used in packaging food. Rather, under the Code,
food manufacturers and retailers must ensure that their (packaged) products are safe, and that they comply with all “relevant” legislation.

Processing Aids

The Code defines processing aids as those substances that perform a technical purpose during food processing, but not in the finished food. Unless expressly permitted by the Code, processing aids may not be used in food sold in Australia and New Zealand. Under the Code, only additives permitted at GMP levels (i.e., those substances listed in Schedule 16, Section S16-2), and substances listed in Schedule 18 may be used as processing aids for food. By way of example, categories of processing aids covered by Schedule 18 include antifoam agents, ion exchange resins, lubricants and release agents, processing aids for water, and microbial control agents.

Standard 1.1.2 defines Good Manufacturing Practice (GMP) with respect to the addition of food additives and processing aids to mean, in part, “to the extent reasonably possible, reducing the amount of the substance or its derivatives that (i) remains as a component of the food because of its use in the manufacture, processing or packaging; and (ii) is not intended to accomplish any physical or other technical effect in the food itself.”

Requirements for Packages

The Code mandates that food packaging must be safe. Specifically, Standard 1.1.1-10 (11) of the Code states that any “packaging” and any “article or material in the packaging or in contact with the food” must not be capable of being swallowed or obstructing any alimentary or respiratory passage, or otherwise cause bodily harm, distress, or discomfort, if taken into the mouth. This standard also explains that “article or material” includes materials in contact with food, including packaging, but also moisture absorbers, mold inhibitors, oxygen absorbers, promotional materials, and writing or graphics in or on the package. Standard 1.1.1-12 clarifies that the Code’s packaging provisions also apply to food that is imported in the packaging in which it is intended to be sold.

Standard 1.4.1 on contaminants and natural toxicants in food further establishes maximum levels of metal contaminants (e.g., lead), non-metal contaminants (e.g., acrylonitrile, vinyl chloride), and natural toxicants (e.g., erucic acid) that are allowed in food. The maximum levels of these contaminants in food are detailed in Schedule 19 (“Maximum levels of contaminants and natural toxicants”) of the Code. Thus, food manufacturers must ensure that packages used in contact with food do not cause the food to exceed the permitted levels of metal, non-metals, or natural toxicants.

Although it specifically pertains to Australia’s food safety standards in Chapter 3 of the Code, FSANZ’s November 2016 guidance document, Safe Food Australia, also provides further input on the requirements under Standard 1.4.1, which apply in both Australia and New Zealand. Safe Food Australia comments that chemicals used to make food packaging may potentially migrate to food, and should thus not present known hazards to the consumer. The guidance highlights that packaging must comply with the maximum limits in food for various food packaging chemicals (e.g., tin in canned foods, acrylonitrile, and vinyl chloride used in plastics) under Standard 1.4.1 of the Code, and manufacturers are further directed under the guidance to minimize chemical migration to food. Even if the Code does not specify permitted levels of additives or chemicals used in packaging, the guidance document states that the packaging manufacturer or supplier should nevertheless ensure that any substance used in packaging will not impact the safety and suitability of the contacted food.
The 2016 guidance document continues to refer to Australian Standard AS 2070-1999 (“Plastic Materials for Food Contact Use”), even though this standard, developed by the independent standard setting body Standards Australia (SA), is no longer directly referenced in the Code or even considered up-to-date by SA. Interestingly, Australian Standard AS 2070-1999 directly references the food-contact regulations in the United States Code of Federal Regulations, and the European Commission’s Directives, noting that new plastic materials must comply with the requirements for food-contact polymers in these jurisdictions.

Finally, the 2016 guidance document clarifies that recycled and reused materials may be used for food packaging applications, provided they are suitable for the intended use and will not contaminate food. The document raises concerns regarding contaminants in the source material and degradation of packaging due to reuse or cleaning and sanitizing procedures, and notes that packaging comprised of recycled material may be constructed to prevent contaminants from migrating into food.

Specific to Australia, Standard 3.2.2 (“Food Safety Practices and General Requirements”) requires food businesses to use packaging that is “fit for its intended use,” only use material that is not likely to contaminate food, and ensure that food is not contaminated during the packaging process. Standard 4.2.1 also includes requirements specific to packaging for seafood in Australia that align with the general requirements for packaging, namely, that packaging must be fit for its intended use and not cause contamination of the seafood.[7]

Future Regulatory Activities

An effort is underway at FSANZ to more closely evaluate the public health and safety risks from chemicals that may migrate from packaging into food, and to determine how these risks can be managed by regulatory or other means. In June 2014, FSANZ issued Proposal P1034 (“Chemical Migration from Packaging into Food”), seeking input on these issues.[8] In a follow up to Proposal P1034, in November 2014, FSANZ requested public feedback regarding any unmanaged public health and safety risks relating to chemical migration from packaging into food,[9] asking for details regarding the volumes of food packaging being produced in Australia and New Zealand, the type of packaging used by the food industry, and the practices that food and food packaging manufacturers were using to manage risks from food contact materials.

In reply to FSANZ’s November 2014 consultation, public comments recommended that the Agency take a “proportionate and informed approach” to addressing risks from chemical migration from packaging to food, and suggested greater guidance for industry on controlling these risks.[10] Large packaging manufacturers and industry associations generally reported minimal risks from chemical migration from packaging into food, and discouraged changes to the Code. Other industry commenters, government, consumers, and non-government organizations suggested providing training for small to medium businesses regarding food packaging regulation. Comments urged FSANZ to focus on the use of recycled materials and printing inks on food packaging, as well as imported packaging. Other comments argued that FSANZ should broaden the scope of the proposal to include modified atmosphere packaging, active and intelligent packaging, and nanomaterials, which FSANZ has indicated will be the subject of future evaluation in any event.

In January 2016, FSANZ published survey results from the 24th Australian Total Diet Study (ATDS), Phase 2, which investigated 30 food packaging chemicals and printing inks (e.g., bisphenol A, epoxidized soy bean oil, phthalates,
perfluorinated compounds) in 81 foods and beverages typically consumed in Australia.[11] The report concluded that most foods and beverages did not contain detectable levels of the analytes at low detection levels (on the order of parts per million or billion), thus presenting a negligible to low risk to the Australian population based on conservative dietary exposure estimates. For two phthalates (i.e., di(2-ethylhexyl) phthalate (DEHP) and diisononyl phthalate (DINP)), however, FSANZ determined that comprehensive analytical data is needed to robustly assess any potential health and safety risks. FSANZ has confirmed that the ATDS study results will inform its work under Proposal P1034.

FSANZ called for further comments on Proposal P1034 on June 10, 2016.[12] The call for submissions discusses the viability of four possible options for the future risk management of chemical migration from packaging to food.[13] In addition to worries regarding the detection of DEHP and DINP in the 24th ATDS, FSANZ expressed concerns that its regulations are not as prescriptive as those in comparative and less developed economies, as well as concerns regarding the lack of clarity of the requirements and the lack of awareness of suitable practices among food businesses. Nevertheless, FSANZ pointed out that, “[t]he risk profile indicated that most chemicals used to produce food packaging are unlikely to pose a public health and safety concern, predominantly because of their low levels of migration into food.”

The four FSANZ options for risk management of chemical migration from packaging to food are listed below, as are FSANZ’s concerns/comments regarding same:

1) The status quo; the status quo would maintain a lack of clarity and certainty for food businesses under the Code, as well as gaps in awareness and management of chemical migration from packaging to food.

2) A prescriptive approach; FSANZ has considered whether a prescriptive approach to the regulation of food packaging would be appropriate, such as pre-market assessments that require manufacturers to affirmatively show the safety of the packaging, or recognition of other countries’ regulations in the Code. FSANZ has identified possible legal issues in recognizing other countries’ regulations.

3) Non-regulatory approaches; non-regulatory approaches to addressing chemical migration from packaging to food include education and information programs for industry; industry self-regulation by industry standards or codes of practice; or industry self-regulation by a co-regulatory approach that would permit companies to follow existing standards, or develop their own approach if they have the expertise to do so. Concerns about same include the need for reliance on industry monitoring, self-reporting, and self-evaluation.

4) A graduated approach; a graduated approach would entail risk management based on the level of risk a substance poses. Chemicals of low concern would be addressed through voluntary industry guidelines or auditing and record-keeping. Strengthening the Code would allow FSANZ to address other chemical migration risks. While FSANZ suggested that this option would be most effective, FSANZ has limited legal authority to create standards that apply to food packaging manufacturers (versus standards for food businesses that use food packaging or package food for sale).

In its June 10, 2016 report, FSANZ noted that, while international regulations do not cover all packaging chemicals and may not be suitable for Australia and New Zealand, they are useful for companies looking for guidance on
suitable packaging formulation. FSANZ surveys demonstrate that food packaging manufacturers in Australia and New Zealand voluntarily apply standards imposed by overseas laws (and which do not apply in Australia or New Zealand), and may also use packaging codes of practice or guidelines. More than 85% of raw material suppliers and packaging manufacturers reported that they voluntarily comply with EU and U.S. packaging regulations, whereas only 40-50% of Australian/New Zealand food manufacturers refer to these regulations in supplier communications.

The requirements for food contact substances in Australia and New Zealand depend on the intended function of the substance that contacts food. For processing aids, a positive list system applies. Packaging, however, must be safe and comply with limited specifications on chemical migration. Nevertheless, the existing regulatory framework for managing risk from the migration of chemicals from packaging to food is under review, and merits continued monitoring.

[1] The 2016 revision to the Code included minor modifications only to Chapters 1 and 2 and their Schedules (which are referenced in Chapters 1 and 2, and set forth detailed information related to the Standards, e.g., the list of permitted processing aids in Schedule 18 of the Code). The requirements under the Code have not substantively changed under the 2016 revision. Rather, the changes are intended to make the requirements of the Code clearer, thereby reducing uncertainty in enforcement of the Code. See the discussion of the Code revision on the FSANZ website, available at http://www.foodstandards.gov.au/code/code-revision/Pages/default.aspx.

[2] The ISFR is a subcommittee of the Food Regulation Standing Committee, which supports the Australia and New Zealand Ministerial Forum on Food Regulation that is made up of ministers from Australian and New Zealand government jurisdictions, and cooperatively creates the countries’ food policy. An overview of the Australia and New Zealand Ministerial Forum on Food Regulation is available at http://foodregulation.gov.au/internet/fr/publishing.nsf/Content/system-overview-1.


[10] These comments are summarized in FSANZ June 10, 2016 call for further comments on P1034,


