European Chemicals Agency

Food Packaging Forum Foundation

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Data submission to the call for evidence for substances in packaging and packaging waste

Dear Madam or Sir,

We welcome the opportunity to provide input on the chemicals in packaging as part of ECHA's implementation of the Packaging and Packaging Waste Regulation (PPWR). The Food Packaging Forum (FPF) is a charitable, research-based organization at the science policy interface. FPF is dedicated to raising awareness about hazardous chemicals, and environmental impacts caused by food packaging and other types of food contact articles. Our work enables evidence-based decision making in the interest of protecting public health and the environment.

Please find within this document an overview of our comments and the publicly available information we are providing to this call. This document is complemented by four separate Excel spreadsheets we submitted containing relevant data as well as a separate methodology document (pdf) submitted describing the data.

1. Evidence for chemicals in food packaging from the FCCmigex Database

Ensuring the safety of food packaging is of high interest for the protection of public health due to the known migration of hazardous chemicals from food contact articles available on the European market into food. Food packaging is therefore a direct and preventable exposure source of the European population to hazardous chemicals. To make the available scientific data on this known chemical migration accessible for decision makers, we have developed the open-access FCCmigex Database (Geueke, et al. 2022).

FCCmigex is a systematic evidence map with information from 1498 references revealing that at least 5005 chemicals have been detected in migration and extraction experiments on food contact materials globally. Data from our latest update to the database reveals that **more than 1000 chemicals have been identified in food packaging and other food contact articles in Europe**. To ensure that our submission of these relevant data to ECHA is limited to packaging and not also including other food contact articles, we filtered the data to include only chemicals used in single-use food contact materials. Additionally, we included only chemicals for which we have at least five entries in the FCCmigex Database, indicating a high level of evidence. If valuable, we would be glad to provide ECHA with further information beyond what has been provided in this call, and we are available to discuss the data and how it could best support ECHA's work within this mandate.

Details on how we filtered and mapped the available data on single-use food packaging to the material and use categories included in ECHA's template spreadsheet are included in a separate brief methodology document in our comment submission under "ECHA_call for evidence_Food Packaging Forum_methodology".

In brief, functional information for each chemical was extracted by comparing CAS numbers with the public PlastChem Project (Monclús et al., 2025), Plastic Health Map (Seewoo et al., 2023), FPF's FCChumon database (Geueke et al., 2024), and expert curated chemical groups. The Food Contact Chemicals Priority List (FCCprio, Wiesinger et al., 2025) was used to identify chemicals that have harmonized hazard data, and its information was included within the submission as "main drivers of substitution".

Key statistics from FCCmigex as submitted in *Call_for_Evidence_Food_Packaging_Forum and Call_for_Evidence_Food_Packaging_Forum_2*

- 12 of the 200 chemicals ECHA listed in Step 1 have been detected in single-use food packaging on the European market
- Of those, 2 are known to be hazardous
- We added an additional 446 chemicals known to be present in food packaging on the European market in Step 2
- Of those, 145 are known to be hazardous

2. Evidence from a survey of industry experts

In 2021, Packaging Technology and Research LLC obtained responses from 80 experts in the packaging industry to determine the likelihood that certain chemicals were used in food contact materials (Sand, 2024a, Sand, 2024b). The interview outreach targeted US packaging experts and is therefore not guaranteed to also represent packaging in the EU/EEA, however there are likely some overlaps.

Key statistics from the industry survey as submitted in *Call_for_Evidence_Food_Packaging_Forum_Sand* and *Call_for_Evidence_Food_Packaging_Forum_Sand_2*

- 6 of the 200 chemicals ECHA listed in Step 1 are likely to be present in food packaging and some other food contact articles according to interviews with experts from the packaging industry
- Of those, 4 are known to be hazardous according to ECHA's C&L Classification data from 2019 (ECHA, 2019)
- An additional 635 chemicals are likely to be present in food packaging and other articles, according to interviews, in Step 2
- Of those, 440 are known to be hazardous

3. Additional evidence from FPF-associated datasets

Food Contact Chemicals Database (FCCdb)

The Food Packaging Forum published the Food Contact Chemicals Database (FCCdb; Groh et al., 2020) that compiles information from 67 chemical lists from publicly available sources related to food contact materials, including regulatory lists and industry inventories. It identifies 12,000+ chemicals linked to the manufacture of food contact materials, including food packaging, with several hundred known to be hazardous (Zimmermann et al.,2022, Wiesinger et al., 2025).

Database on Chemicals associated with Plastic Packaging (CPPdb)

The Food Packaging Forum has collated a broader list of chemicals associated with plastic packaging (CPPdb; Groh et al., 2019). The CPPdb contains 906 chemicals (148 known to be highly hazardous) identified as 'likely' used in plastic packaging and another 3377 chemicals (214 highly hazardous) as 'possibly' associated.

State of the science on plastic chemicals (PlastChem database)

The PlastChem database represents the current state of scientific knowledge on chemicals found in plastics, including those used in plastic packaging (Monclús et al., 2025). The PlastChem database identifies 2,489 chemicals as used in plastic packaging, 1,047 of which are highly hazardous ('Red List').

If any of these datasets are of interest to ECHA, we would be glad to share more detailed data or discuss how to best use these publicly available datasets.

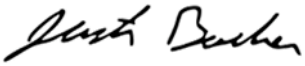
4. Preventable exposures and growing health costs

The available evidence makes it clear that there are hazardous chemicals and chemical groups known to be used in packaging in the EU/EEA, and growing research links their exposures to long-term health effects including breast cancer (Parkinson et al., 2024) and metabolism- and endocrine-disruption (Stevens, et al. 2024; Landrigan, et al. 2025). Exposure to just a small subset of known endocrine disrupting chemicals has been estimated to cost the European economy more than €157 billion each year in health care expenses and lost earning potential (Trasande et al., 2015). In early 2021, ECHA found that the benefits of the REACH restriction on four phthalates outweighed the associated business costs (e.g., of finding alternatives) by more than 10-times (ECHA, 2021). Restricting the use of known hazardous chemicals and chemical groups in packaging can therefore significantly benefit both public health and the European economy.

The Food Packaging Forum remains available to engage further with ECHA as the agency continues this important work. FPF's resources are regularly being updated and expanded. Please reach out to us with any questions about our existing data and our ongoing work in this area. We thank you for this opportunity to provide input.

Sincerely,





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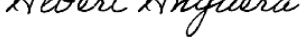
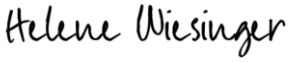

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