



USCIB Written Comments to the OECD Environment Policy Committee

February 2026

Report on Chemical Content Validation of Recycled Plastics

ENV/CBC/RM(2025)12/REV1

General Comments

- The Report on Chemical Content Validation of Recycled Plastics does not make a compelling case for why chemical content validation is uniquely challenging for plastics relative to other widely recycled materials. Paper, as well as glass and metal also contains additives and undergo recycling. Without a cross-material comparison, it is difficult to assess whether plastics present a greater, lesser, or comparable challenge (and therefore how to prioritize policy attention). Can it be assumed that the lower recycling rates of plastic for instance make the issue lower in plastic? Or that the many years of paper, glass and metal recycling make it possible to leverage some of the best practices in those materials across to plastic? We recommend adding context comparing plastics with paper/glass/metals to help readers interpret whether the concerns described are plastics-specific or reflective of recycling systems more broadly.
- The document seems mostly concerned with potential chemical accumulation in plastic via mechanical recycling. But the document lacks clarity in that most of the points just say “recycling.” The statements specific to mechanical recycling are not designated as such, someone reading certain sections might attribute the concerns and proof points to include advanced/chemical recycling. Every time the word “recycling” is used, there should be an adjective in front of it designating what they mean, and most of them will then say “mechanical recycling” to be clearer. We recommend that the report consistently distinguish “mechanical recycling” from “chemical/advanced recycling,” particularly where the underlying mechanism of concern is polymer degradation, additive carry-over, or limited contaminant removal that is characteristic of mechanical routes.
 - Example: point1 on page 2 should read “Chemicals of concern can persist and accumulate in mechanical-recycling-derived plastics, potentially leading to increased toxicity compared to virgin plastics.”
- The document contains inconsistencies in terminology “Chemicals of concern”, “Substances of concern”, “problematic substances”, “problematic chemicals”, “hazardous substances”, Recommendation: select a single umbrella term (e.g., “substances of concern”) and define it once, aligned where possible to established regulatory concepts (e.g., restriction lists, hazard classes, SVHC-type concepts) to avoid confusion and over-breadth.
- We also want to highlight ongoing industry efforts that support some of the report’s conclusions. For example, the ECETOC Additives Task Force has developed a Risk Assessment Framework to evaluate the suitability of a waste stream for specific applications. We have completed the first manuscript and are in the process of finalizing residual comments before submitting it to the journal (i.e., Environmental International). A second manuscript is also underway and will include case studies demonstrating the use of the framework to assess the suitability for recycled plastics for particular applications. In addition, the Cosmetic Packaging Toxicology Consortium (CosPaTox) has developed a guideline and an approach for safely evaluating the use of post-consumer plastic recyclates in cosmetic and detergent packaging. Although voluntary, CosPaTox has now been designated as a DIN SPEC standard process by the German Institute.

- We also would like to draw OECD's attention to ongoing ICCA efforts related to transparency and traceability under the Global Chemicals Framework (GFC). This is important as regions with less established chemical management and/or food contact regulatory frameworks will likely face the greatest difficulty in providing this level of information.

Specific Comments

Page 2 :

- Point 1: Suggest to contextualize “13000 chemicals” with the ICCA database results of approximately 4500 additives that are quoted later in the report (<https://icca-chem.org/news/icca-expands-plastic-additives-database-global-transparency/>)
 - All plastics, virgin or recycled, should be held to the same standards. Policy to support safe recycled plastics must be risk-based and application-specific, i.e. take into account exposure to the material/product.
 - The general quality of plastics is also important for human health, the environment and safety, not just whether or not there are contaminants in the material. There have been reports made of mechanical recycled material degrading much faster - which is a very important variable in consumer safety.
 - Would be good differentiate between different recycling technologies.
- Point 2: Suggest adding ISO22095 :2020 and ISO22095-2 :2026 to ‘System-level traceability and ecolabels.
- Point 2: Consider adding ISO14021 to sustainability-related claims
- Point 4: Mechanical recyclers often manage contaminations by selection of feedstock. Analytical testing capabilities are typically limited.
- Point 5: “economic” The statement that “recycled plastics are generally more expensive than virgin” over-simplifies complex supply demand drivers.

Page 3:

- Point 5: “Regulatory” Advanced Recycled Plastics follow the same international standards for virgin plastics quality control. It is just for non-advanced recycled plastics that testing is not harmonized.
 - A series of global, harmonized standards, with a common baseline complemented by application-specific tests is a pre-requisite to effective policy in this field.
- Point 6: This point bundles several broad conclusions without the necessary substantiation.” The term Substances used in this Point has a very broad definition in the definition section. Suggestion to add definitions for “Substances of Concern” and “Substances of Potential Concern” in the definition section or to make this Point 6 clearer. It would be interesting for the authors to clarify if the issue on plastic is lesser or greater than alternative materials to help contextualize and prioritize the issue.
- Point 7: “Targeted levies” runs counter to other economic policies targeting affordability, inflation, employment.
 - At this stage of the business, policies should focus on quality control after the recycling step and when material enters the market... and let the industry govern plastic waste standards (based on the maturity and efficiency of the current infrastructure). At a later stage (with much greater demand for recycled materials, enabling and mature legislation, consumer education, etc), I could see a big benefit of source-separating collection.
 - End-use application/intent of the recycled pellet, is very important to take into consideration as well. Often these markets may set their own standards - so it is important to ensure this work complements and not overlap with the existing standards.
 - Upstream and design measures: This would not address contamination during collection, sorting and recycling. This may be useful if the majority of the waste stream is directed towards non-advanced recycling technologies. Unfortunately, since most of the global waste is still landfilled or incinerated - this option would be very expensive - for the "little" stream that will end up in non-advanced recycling "(mechanical, dissolution, ...)

- Strengthening downstream measures: Closed-Loop recycling is too cumbersome to deploy at global level, only in certain regional clusters this can be successful. Source-separation may be a little more realistic. Although, even in closed loop sorting or source-separation there is still a massive possibility for contaminants to be introduced. Consequently - I do not believe this can be a worldwide solution... and will only be successful in very specific regions/ with local partnerships.
 - Advanced recycling technologies that break plastics down to chemical building blocks and enable the processing of those building blocks in the same polymerization process as virgin plastics allow for minimal contamination. Also, there are already rigorous testing standards for reactor-made polymers (virgin + advanced recycled)
- Supporting chemical identification: When it comes to mechanically/physically recycled plastics, every sample is unique, so this would not add value.
- Point 8: Suggest to replace 'harmonized standard' by 'international standard'. Harmonized standard is an EU term and may create confusion outside the EU context.
 - Not sure how traceability will improve Chemical Safety. Maybe downstream traceability can help, but upstream traceability is mainly to prevent fraudulent recycling claims.

Page 6 :

- PIR : Suggest to replace the word Consumer by the word End User, since the term consumer often refers to private use in households and may not capture business-to-business (B2B) end-use contexts.
- PCR definition: Suggest to replace the word Consumer by the word End User, since the term consumer often refers to private use in households. If necessary the definition can clarify that the end use may be a house hold end user or a business end user.

Page 7 :

- Recycled plastics : Suggest to remove "but excluding Energy Recovery". This is not needed for the purpose of this document. This exclusion is not a thermodynamic exclusion, but a potential policy choice and therefore should not be considered, and is out of scope of this document.

Page 8 :

- Paragraph 1: Suggest to add "Plastic is a ubiquitous component because of its strength, low cost, durability, environmental benefits, and wide range of properties". Per definition of US national Academy of Science (<https://www.nationalacademies.org/read/27978/chapter/7>)
- Paragraph 3: "Flexible packaging and multi-layered material plastics are especially difficult to sort". Suggest instead to state that to context that Flexible packaging and multi-layered

material plastics are especially well suited for Chemical Recycling (per OECD 2023 [https://one.oecd.org/document/ENV/CBC/MONO\(2023\)1/en/pdf#:~:text=GRADE%20PLASTIC%20PACKAGING-,Unclassified,in%20this%20document%20as%20Annexes.](https://one.oecd.org/document/ENV/CBC/MONO(2023)1/en/pdf#:~:text=GRADE%20PLASTIC%20PACKAGING-,Unclassified,in%20this%20document%20as%20Annexes.)) Also should include that flexible packaging is more expensive to sort.

Page 9:

- Paragraph 4 : Glycolysis, methanolysis and hydrolysis are chemical recycling technologies. There is no reason to selectively mention them. The majority of packaging is based on polyolefins and will require pyrolysis or gasification technologies for chemical recycling. Most announced chemical recycling projects around the world focus on pyrolysis technologies.

Eastman's press release (Plastic News 01/30/2026) - on methanolysis - shares a different perspective. Whereby brand owners like Pepsico are increasing offtake of chemical recycled material as they become more aware of problems with mechanical recycling. So yes, mechanical recycling may be "cheaper" but if it is not a good fit with the consumer/packaging market, so not sure it is very relevant as "primary strategy."

- Paragraph 5: "Though still in early stages, pilot plants have shown positive results, suggesting that solvent dissolution could become economically viable..." and claim to have a fairly low carbon footprint (compared to pyrolysis).
- Paragraph 6 : Suggest to remove: The first challenge mentioned regarding using a supercritical solvent relates to the polymer production process, not the product and hence irrelevant to a chemicals in product discussion. Also the comment around xylene having "a larger impact on human health" is not substantiated.

Page 10 :

- Paragraph 8: This particular part of the report should explain how the increase of plastic recycling in respect to chemicals in product is creating or not creating a new or similar issue to paper, glass metal when recycled at higher rates.
 - It's hard to understand the link between product safety and up stream (point of origin) traceability. Only down stream traceability would make sense to me for product safety (in case of recall). The upstream traceability is more to verify the origin of the plastic waste resource is legit.
- Paragraph 8 : The limitations in the recycling of thermosets are only applicable to mechanical and physical recycling. Chemical recycling can readily deal with thermosets based on hydrocarbons.
- Paragraph 8 : Regarding the sentence with the Carney reference, the Carney paper has one single mention of chemical recycling, the whole rest of the paper focused on mechanical recycling. Suggest to remove the reference to chemical recycling in that sentence.
- Paragraph 9 : Phasing out substances is a very complex process that requires more than trade-offs between technical functionality and safety. Other considerations such as environmental or economic ones are equally important. Consider alignment with point 13 on page 11.
- Paragraph 10 : The hazardous character of certain substances does not necessarily translate

in an actual risk to consumers. Risk, exposure etc need to be considered alongside any hazard classification.

- Paragraph 10: : How does the number of 16,325 chemicals mentioned in this paragraph relate to the number used in the beginning in Paragraph 1 of the Executive Summary of 13,000 ? The Paragraph 10 also mentions the ICCA work, yet without citing the 4200 number from ICCA. If the document's intent is to report different numbers from different sources, we would suggest citing all the numbers from every source and explaining the differences.

Page 11:

- Paragraph 12: We have major concerns on feasibility (time, resources, scope, etc.)
- Figure 3 is a qualitative chart from an Opinion Paper, the charts have no graduations, the data has no dimensions, the Other category is not defined, other important impact categories such as Water, Land Use or Economic impact and not included, the chart most likely only considers mechanical recycling. Overall, it's a very confusing figure and needs clarification if it remains. We recommend removing this chart and reference to Fantke P et al (2019) from the report because it does not meet the necessary scientific criteria for citation.

Page 12:

- Paragraph 14 and 15: Suggest to add that additives can also enhance the recyclability of plastic materials and restore properties.
- Figure 4: *"Chemicals can be released during the use of plastic products"*. First comment, is this accurate and substantiated ? Should it read the "misuse" similar to paragraph 19 ? Usually, plastic products put in the market are regulated so that the intended use is safe. Second comment, the picture chosen to illustrate use of products can be misleading: the visual shows only bottles. If any recommended use is needed, this should be labelled on the plastic products.

Page 13:

- Paragraph 17: Not all phthalates are equally problematic. The presence of phthalates is not good indicator of a hazard. Suggest to clarify the comment.
- Paragraph 18 : Suggestion to clarify that the Dutra reference on recycled HDPE is specific to mechanical recycling.

Page 14:

- Paragraph 21: We suggest to add the word "mechanical" in front of every "recycling" word in all bullets. The conclusions do not necessarily apply to chemical recycling.

Page 15 and 16:

- Paragraphs 25 and 28: We would suggest to clarify that EN 15343:2007 is limited to mechanical recycling. An upcoming revision may include chemical recycling.

Page 21:

- Paragraph 72: Proposed edit based on the fact that the term "Sustainable" is not needed here, and additional clarity is needed (suggestion to add the proposed last sentence) : "The mass balance is a chain of custody model in which characteristics (such as the type of raw material, country of origin, greenhouse gas value) remain assigned to material batches on an accounting basis. In the chain of custody model using mass balance, the mixing of batches in the transformation process where the certification is applied is permitted if it is guaranteed that the attributed volume of sustainable materials does not exceed the input of those materials. Safeguards that prevent GHG burden shifting, double counting and overestimation of benefits are still required."
- Paragraph 73: Mass balance results in "attributed content", not "content". Would suggest to add "attributable" in front of the word content eg. "In the context of plastics recycling, the mass balance methodology is considered fundamental for the upscaling of chemical recycling technologies. Even more important is the measurement rule that is applied to the mass balance formula. While less strict rules (i.e. free allocation) can allow more recycled attributed content to be claimed in plastics, such flexible rules can also raise concerns about misleading recycled content claims in plastic products. Adopting more strict measurement rules (i.e. polymer-only) would limit recycled attributed content claims to the proportion of chemicals produced that are used only in the production of plastic products."
- Paragraph 74: Similar to Paragraph 72, suggest to remove the term "sustainable and non-sustainable" as the Paragraph is broader. Mass balance can be credit-based and based on a rolling average. The depicted mass balance model is only about the credit method.
- Paragraph 75: Tracer system may not be compatible with all recycling technologies. Chemical recycling technologies such as pyrolysis and gasification would require isotope based tracers which are expensive and have high detection limits.

- Paragraph 76: Propose to delete 'greenhouse gas emissions' from the 2nd last bullet point. There is no international standard that states the compatibility of mass balance (credit method as used in the text) with LCA. In fact, the applicability of mass balance in carbon footprint calculation is highly debated and typically considered as not aligned with existing ISO standards.

Page 36:

- Paragraph 112: "Involve significant capital and operational costs...": Correct, especially when taking into consideration the amount of samples that would need to be taken, the time it takes to run all tests, the intermediate storage that is needed to keep material "blocked".... is tremendous.
- Paragraph 114: Competitors reducing testing to cut costs does not immediately translate into undermining material safety and reliability if regulatory and safety standards are still met. An example of this is the ability to read-across to similar chemistries under similar conditions with modeling data, etc to support conclusions. Computational modeling and read-across approaches are accepted by many global regulatory agencies to support safety and compliance, and also can address the principle of reducing the number of animals needed for testing. Additionally, turnaround time can sometimes be 4-5 days per sample.
- Paragraph 116 : Recycled plastics are not always more expensive, and prices are the result of more complex supply demand mechanisms. The comment on testing is only relevant for mechanical recycling.

Page 37:

- Paragraph 116: The key difference between virgin and recycled resins is that you are comparing a fully mature trillion-dollar industry with an emerging, fragmented industry. Of course cost competition is difficult - but the testing cost is just a small component.

Page 38:

- Paragraph 122 : Not applicable to chemical recycling. Would recommend that the paragraph add some words to explain the benefits of chemical recycling, potentially drawing analogies from other recycling processes such as metal and glass recycling.
- Paragraph 124 : The second sentence is contradicted by the experience of other large scale continuous processes in existing industries that have implemented economically test methods (eg. refineries, petrochemical plants).

Page 39:

- Paragraph 129: "However, strict control on import of products from regions without these requirements is not guaranteed." – all materials must be held to the same standard, whether imported or locally recycled.

Page 40:

- Paragraph 131: Overall, the report does not make a clear case why those challenges listed are any different for plastic than for paper, which would be interesting as paper has achieved high recycling rates. Getting this right is important, otherwise there is the risk suggesting measures that have not been necessary to grow paper recycling.
- Paragraph 131: Overall, this paints a very negative picture whereas several countries (eg. Japan, Germany) have achieved significant recycling rates for many years.
- Paragraph 131 (point 3): Suggestion to limit to information on chemicals that are present in the final product. Disclosure should remain fully aligned with existing chemical management legislation.

- “A lack of information” – needs to include “harmonized information.” this is not an accurate representation of the situation: while the information available is not perfect, vast amounts of data are available.
- Paragraph 131 (point 4): Suggest to edit “Currently, commonplace recycling technologies are not capable of removing all chemical substances of concern” to “Currently, commonplace recycling technologies are not capable of removing all chemical substances of concern, however, efforts should be focused on reducing chemicals of concern below risk thresholds if necessary.” Would suggest to further substantiate. Whose concerns? Are these concerns higher than other solutions such as landfill, incineration, mechanical recycling? Are the concerns higher than recycling of glass metal and paper?
 - The technology is developed, it is the legislative framework that needs to be developed.
- Paragraph 132: Overall, the limitations of Paragraph 131 may make the recommendations of Paragraph 132 unnecessary, and potentially have unintended consequences, such as adding costs to no benefit.
 - “Upstream/design stage measures” - overreach and practically/economically not feasible to deploy at global/large scale.
- Paragraph 132 (Point 1): This is a prescriptive approach that seems to go beyond what is needed to ensure safety of products in a given application. Producers should be free to use any additive provided the resulting product is safe for its intended use.
- Paragraph 132 (Point 2): Should be much more nuanced than simply "restricting"- I believe the next-best alternative needs to be thoroughly assessed as well. As that could be way worse. If there is no next-best alternative a socio-economic study is needed. This looks like a precautionary approach. Restrictions should be applied on an application-specific basis and only to chemicals demonstrated as posing a risk, maybe even a limited “imminent human health risk.”

Page 41:

- Paragraph 132: First the term “problematic chemicals” is not a defined word, would suggest to clarify. Second, we would also suggest to focus on chemicals that impede recycling and/or reuse. Third we do not recommend the focus to be on hazardous classes, which are already addressed through relevant chemical management practices.
- Paragraph 132 (transparency of chemical content in plastic products): Disclosure requirements should be limited to chemicals that are present in the final product and should remain fully aligned with existing chemical management legislation. These requirements should neither exceed nor contradict current rules governing the safe handling and use of chemicals. It is also unclear what is meant by “product passports.” If this refers to “digital product passports”, it should be noted that it is only now in the early stages of implementation in the EU and is designed primarily for finished consumer products. Considering the use of such a tool in other jurisdictions would be premature and could create unnecessary administrative burdens. These are very costly measures, which would make it challenging to protect confidential business information and don't necessarily add value. A system to test and certify products would be adequate.
- Paragraph 132 (point 2): “market restrictions for chemicals with unknown or incomplete hazard profiles”. This statement could be misleading. The effort made by industry (e.g., ICCA) with the additives database shows clear results *“identifying 4,549 plastics additives in commerce today, 94.5% of which are on at least one major chemicals regulatory inventory. Furthermore, 90% of the plastic additives verified in commerce have readily accessible toxicological data to help inform a risk assessment, challenging claims of widespread data gaps on plastic additives”*
- (point 5): “Market-based recognition schemes rewarding transparency”. This statement could be misleading: what does it mean? Transparency for whom (e.g., B2B or B2C)? Which type of recognition/reward?
 - Transparency has no correlation with product safety so there is no reason to reward it.
- Paragraph 132 (*Downstream measures*): These measures would add costs and constraints, without

preventing contamination.

- Paragraph 132 (*Economic support options for chemical identification and analysis of recycled plastic*), Point 2: While we fully support transparency, a publicly available database without the necessary qualitative background is likely to create unwarranted concerns based on the presence of contaminants, whereas there might be no exposure and therefore no risk in the application that material is used in.
- Predictive/targeted screening seem counterintuitive if the goal is to systematically check to ensure products are safe for their intended use.
- Overall, the report should recognize the significant limitations on eco-modulations expressed by the scientific community such as “EPR has yet to crack the code on how to move producers toward greater design for circularity, an idea as old as EPR itself. The latest attempt is in the form of modulated EPR fees (also called eco-modulation), but it is too early to assess their effectiveness.” ([Geyer, UCSB, Jan 2026](#)). “Eco-modulation might be currently best viewed as a policy experiment on improving EPR and the drivers of eco-design more broadly.” ([Rifset, Yale August 2023](#)).

