

August 27, 2026

Comments on Draft Indian Standard PCD 21 (33943), Plastic Containers for Microwave Use – Specification

Dear Madam or Sir,

The [Food Packaging Forum Foundation \(FPF\)](http://foodpackagingforum.org) welcomes the opportunity to comment on Draft Indian Standard PCD 21 (33943), Plastic Containers for Microwave Use – Specification. FPF is a non-profit, independent, and science-based research and communications organization working at the science-policy interface, with expertise in hazardous chemicals in food contact materials.

FPF appreciates the efforts of BIS to establish requirements for plastic containers intended for microwave use. The draft appropriately recognizes the importance of preventing the release of harmful substances during food heating applications.

However, the latest scientific evidence indicates that there is a need to further strengthen the chemical safety provisions of the draft standard. In particular, we would like to highlight two issues for consideration.

1. Limited consideration of food contact chemicals found in plastics

The draft establishes specific migration limits for selected heavy metals and DEHP. While these provisions are valuable, they address only a small fraction of the known hazardous chemicals that may be present in plastic food contact materials including in PET, PP, and PE. Plastic containers can contain numerous additives and other constituents, including plasticizers, antioxidants, stabilizers, catalysts, processing aids, pigments, and other substances capable of migrating into food and that may be hazardous to health.

Our free and publicly available [FCCmigex](#) and [FCCprio](#) databases show that hundreds of chemicals are reported to migrate from plastic food contact materials into food or food simulants including PET, PP, and PE, and many of these chemicals are hazardous to human health. Based on this scientific evidence and to better protect the health of the Indian public, BIS may wish to consider significantly expanding the chemical scope of the standard beyond the substances currently specified and to review the additional available scientific evidence regarding food contact chemicals of concern.

2. Concerning use of recycled plastics in microwave food contact applications

The draft standard appears to permit the use of recycled or reprocessed PET, PP, and PE in microwave food contact applications, subject to standards and guidelines notified by FSSAI. From our understanding, however, FSSAI has published provisions and guidance only relating to recycled PET (rPET) for food contact applications. It is not clear from the draft whether equivalent requirements exist for recycled PP and PE or which specific standards, approval mechanisms, or contaminant-control requirements would apply.

Moreover, peer-reviewed [scientific studies](#) ([Geueke et al., 2023](#)) have demonstrated that recycled plastics including PET and PE can contain increased levels of contaminants originating from previous uses, mixed waste streams, degradation processes, or other unintentionally present substances. These concerns are particularly relevant under microwave-heating conditions because elevated temperatures can increase migration of known hazardous chemicals into food. This is therefore a direct and preventable exposure source of the Indian public to these harmful chemicals.

For these reasons, BIS may wish to reconsider the use of recycled plastics in microwave food contact applications or, at a minimum, explicitly identify the applicable regulatory requirements that would ensure sufficient chemical safety.

Conclusion

We commend the committee for developing this standard and for recognizing the importance of ensuring the chemical safety of plastic containers used for microwave heating. However, based on the latest available scientific evidence, BIS may wish to strengthen the draft to better protect public health by expanding the consideration of food contact chemicals, and by reconsidering or clarifying the provisions relating to recycled plastics in microwave food contact applications.

We remain available to provide additional scientific input and to support BIS in the development of standards that ensure a high level of protection for India's consumers.

Yours sincerely,

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