

Fact bite #33



Multimaterial food contact materials



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Multimaterial food packaging commonly combines layers of different materials like paperboard, plastic, and aluminum. Each layer serves a different purpose, such as providing structure, preventing leaks, and protecting food from oxygen, light, and contamination.

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Common examples include beverage cartons, laminated pouches, tubes, and trays. These packaging items are widely used across the food industry because they are convenient and lightweight.

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Hazardous chemicals can migrate from the layers made of non-inert materials into food, especially from the layers directly in contact with the food. Chemicals can also migrate from the outer layers into the food, such as printing inks used to label the exterior of the packaging.

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Since multimaterial packaging articles are made of multiple layers glued together, they can also be hard to separate. This makes (closed-loop) recycling complex and limits the ability to recycle them into new food contact materials.

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Including a functional barrier layer like aluminum can prevent chemical migration from outer layers of the packaging.

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While efforts are being made to improve the collection, sorting, and recycling of multimaterial packaging, many design for recycling guidelines simply recommend avoiding them and sticking with simpler monomaterial packaging options.

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