



The Pizza Box Mystery

by [Lori Brown](#)

Many people assume that pizza boxes are recyclable. In fact, most boxes have recycling symbols on them and are traditionally made from corrugated cardboard. They are, in and of themselves, recyclable.

However, what makes parts of them non-recyclable is the hot, tasty treat that comes inside them, specifically, the grease and cheese from pizza that soil the cardboard.

So there you have it, pizza boxes that are tarnished with food, or any paper product that is stained with grease or food, are not recyclable - unless you remove the tainted portions.

But why is this? And what are the implications for the general, pizza-loving public? Mmm, pizza.

How it Gets Recycled

Food is one of the worst contaminants in the paper recycling process. Grease and oil are not as big of a problem for plastic, metal and glass, as those materials are recycled using a heat process. But when paper products, like cardboard, are recycled, they are mixed with water and turned into a slurry. Since we all know water and oil don't mix, the issue is clear.

Grease from pizza boxes causes oil to form at the top of the slurry, and paper fibers cannot separate from oils during the pulping process. Essentially, this contaminant causes the entire batch to be ruined. This is the reason that other food related items are non-recyclable (used paper plates, used napkins, used paper towels, etc).

"The oil gets in when you're doing your process of making paper," said Terry Gellenbeck, a solid waste administrative analyst for the City of Phoenix, Ariz. "The oil causes great problems for the quality of the paper, especially the binding of the fibers. It puts in contaminants, so when they do squeeze the water out, it has spots and holes." But what about other things regularly found on paper products, like ink? "Most inks are not petroleum-based so they break down fast. Food is a big problem," he said.

Also, be mindful of adhesives that may be on the pizza box (coupons, stickers, etc.) as those are contaminants. Known as "pressure sensitive adhesives (PSAs)" these can ruin the recycling process just as much as oil or food remains.

Sneaks

Many people admit trying to "sneak" their pizza boxes in with cardboard boxes and such. In reality, this does more harm than good as the contaminated cardboard could ruin the whole recycling batch.

In fact, contamination in the recycling business is a big problem. Some estimates put the costs of irresponsible contamination in the neighborhood of **\$700 million per year** industry-wide. Gellenbeck estimates that for the City of Phoenix, contamination costs them around \$1 million annually, because of damage to machinery,

disposal costs for the non-recyclable material and wasted time, materials and efficiency. With the City processing 129,000 tons of materials in 2008 (around 7 percent of this is cardboard), money is an important factor as to why residents should know what their municipalities do and do not accept.

So, What Do I Do?

The easiest remedy for this problem is to cut or tear out the soiled portions of your pizza boxes and trash them. For example, you can tear the top of the box off, recycle that and throw away the bottom part containing the grease. If the entire box is grease-free, the whole box can be recycled with a guilt-free conscience.

Another option to recycling cardboard is to compost it, although the grease rule still applies here as well. “Even with oils, you shouldn’t compost [greased cardboard]. It causes rotting, you get more bugs and smell and it’s just not good for the plants,” said Gellenbeck.

Most importantly, being well-versed on what your local recyclers accept, can make the biggest difference. “It all depends on where your processor sends your paper, too,” said Gellenbeck, whose authority applies only to the City of Phoenix. “If you can keep a particular thing like the food out, the plastics out, all those things that really shouldn’t be there, it would help.”

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