

# Debugging Degradables

by Cathy Cirko

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## Become familiar with Canadian standards for the use of biodegradable plastic products

IT SEEMS THAT everyone is trying to do “the right thing” these days and be green. Unfortunately, there is a lot of marketing around the subject and it can sometimes be hard to determine what may be “hype” and what is actually better for the environment.

Purchasers and users of biodegradable plastic products should be aware that there are standards in Canada for the use of plastic degradable products. As such, purchasers and users are encouraged to become familiar with these standards. To not do so is to put yourself at risk of government intervention

(i.e., the Competition Bureau) in the event that you mistakenly make false claims.

### Is landfill an option?

There is no recognized standard for biodegradation in landfill. The Competition Bureau within Industry Canada – which does have the power to prosecute for false claims – has specifically stated that, “It is difficult to substantiate a claim that a product normally disposed of in landfill is ‘degradable’.”

Modern landfills are designed to minimize degradation. Nonetheless, some degradation

of organic materials does occur, albeit slowly. Unlike degradation in a compost facility where the principal gas product is carbon dioxide, degradation in a landfill releases methane, a greenhouse gas 21 times more potent than carbon dioxide. For this reason, Germany has banned biodegradable products containing more than two percent carbon from entering landfill.

### Litter prevention

If preventing litter is the reasoning behind the purchase of biodegradable plastic products, then there is a need to think again. There is no standard for biodegradable plastics as litter. Given the climate in Canada, litter could be on the ground from months to years, if not collected. Plus, there's the issue of whether using degradability as a way of dealing with litter acts as potential encouragement for littering.

### What standards do exist?

So if there are no biodegradable standards for landfill or litter, then what standards do exist? The answer is relatively few to date. Although there is a handful of degradable plastic standards for a variety of applications and environments, there are really three main standards that we could potentially encounter on a regular basis.

ASTM D6400 is a standard created specifically for compostable plastics in municipal/industrial composting facilities. It was designed for plastic bags used in the collection of organic materials where municipal/industrial composting collection and processing programs exist.

ASTM D5271 is another biodegradable standard. It has been developed for products designed to be disposed of in wastewater treatment facilities. A plastic laundry bag, such as the kind used in hospitals, is an example of a water-soluble plastic product that meets this standard. The bag typically is used to contain soiled sheets or other linens, and can be thrown right into the laundry

Note: The word "degradable" actually means only that the material or product will break down, that the fragments will remain. Biodegradable, on the other hand, means the product or material will further disintegrate into water, carbon dioxide and organic material, and leave no harmful inorganic substances behind. Today, most people use the word "degradable" when they actually mean "biodegradable." As a result, the two words have become almost interchangeable and confusion may occur.

with the bag's contents. That way, no one needs to re-handle the contents and risk contamination. The bag eventually will biodegrade in the sewer system.

ASTM D7081 is a standard developed for plastic products that are disposed of in marine environments. An example would be trap doors on lobster pots. If the pots become lost from their moorings, the doors will eventually biodegrade to prevent any lobsters from becoming trapped.

Each of these standards is specific to the disposal method of the plastic product.

### Concern for impact on recycling

The influx of biodegradable products on the marketplace has raised concerns regarding the effect of degradables on recycling. These concerns are warranted. A study conducted by Centre de recherche industrielle du Québec (CRIQ) examined the recyclability of degradable bags. The results were eye-opening. It concluded that if the bags were mixed together, some degradable bags could negatively affect the recycling stream. As a result, Recyc Québec, with assistance from industry, is launching a certification program that will identify those bags claimed to be biodegradable that are compatible with conventional bags when recycled together.

So strong is the evidence that degradable plastic bags will negatively impact the regular plastic bag recycling stream that the Association of Postconsumer Plastic Recyclers (APR) notified the City of San

Francisco that its plastic film processors would no longer accept their plastic bags because they were biodegradable. To do so would put the entire recycling stream in jeopardy. Similarly, Trex Company issued a letter stating that it was concerned about the inclusion of biodegradable plastic bags in its plastic decking products. It noted that, "Any polyethylene product that contains the feature of degradation reduces the reliability and value of the entire recycle stream."

### **What guidance is available?**

The best piece of advice concerning degradables is to comply with the National Standard of Canada CAN/CSA-ISO 14021 "Self-Declared Environmental Claims and Labels" (available at [www.csa-intl.org/onlinestore/GetCatalogDrillDown.asp?Parent=429](http://www.csa-intl.org/onlinestore/GetCatalogDrillDown.asp?Parent=429)). Regardless of whether you are choosing degradable products or making claims of degradability, this guideline should be your primary directive.

Additionally, the Competition Bureau has joined forces with the Canadian Standards Association to create an interpretative guide of the ISO14021 standard. This document is available by searching "environmental claims" at: [www.competitionbureau.gc.ca](http://www.competitionbureau.gc.ca).

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If these ISO 14021 guidelines are not adhered to, the Competition Bureau does have the authority to come in and intercede. Last year in Britain, there were a record number of complaints to Britain's Advertising Standards Authority and in Australia, the Federal Court has had a successful prosecution based on ISO 14021. Canada's Competition Bureau does have the power to prosecute.

The six main points in the standard are as follows:

- Claims have to reference an approved standard;
- Standards and test methods have to be approved by an international body or a recognized industry accepted body;
- Third-party certification to a standard is well advised; (In North America, there are only two accredited agencies and both are specific to compostable plastic bags for municipal/industrial composting facilities: the Biodegradable Products Institute and the Bureau de Normalisation du Quebec);
- Environmental benefits or claims need to be specific as to where degradation is to occur (e.g., in a municipal/industrial composting facility);
- Environmental impact needs to be investigated, such as emissions, degradation residues or impact on recycling; and
- Documentary evidence of compliance to a standard needs to be made available.

### **Additional help**

There are a couple of new initiatives underway to provide further help on degradable plastics. The Competition Bureau of Canada and the Canadian Standards Association are offering environmental claims seminars in different locations across the country. More information can be found at [www.csa.ca](http://www.csa.ca).

Additionally, the Environment and Plastics Industry Council (EPIC) is trying to provide product stewardship leadership so that biodegradable plastic products are marketed properly in Canada. The Australian plastics industry has already come out with a Guide, which has been well received by all stakeholders. The Canadian version of the *Product Stewardship Guide and*

*Commitment on Degradable Plastics* ultimately will provide a database of certified biodegradable plastic products.

### **It's your call**

Opting to be both cost-effective and green can be difficult, especially as new "environmental" products continue to be introduced to the marketplace at a record pace. The best course of action is to

understand the terminology, along with the current standards that have been put into place to help guide your purchasing decisions. These standards exist to protect the purchaser. Your responsibility, as the purchaser, is to ensure that the products in question meet these standards and have been verified by an independent third-party organization. 

# Bags anyone?

**Partnering to improve plastic bag recycling is on the rise as a tool to manage landfill capacity and to green a business**

RECENT MEDIA ATTENTION ON plastics bags has increased their visibility as a valuable resource that should be diverted from landfill. And retailers across the country are jumping onboard to help set up a network of in-store plastic bag recycling programs to do just that.

These partnerships pull together municipalities, retailers, industry and the public. The municipalities promote the programs to the residents, while the retailers set up the collection sites and work with industry to implement the recycling programs. The public brings back the used bags to the store.

Several partnerships have been in place in Atlantic Canada and the western provinces for a few years now. In fact, one of the largest manufacturers of plastics bags and film in Atlantic Canada, Inteplast Bags & Films Corp., is celebrating its second decade of having a closed-loop recycling program that sees the bags returned to retail to be recycled into new bags. The company has recycled over 100 million pounds of

plastics through the program, and is working in partnership with approximately 200 retail stores across the Maritimes.

Out west, major retail chains are also onboard. The list includes Overwaite, London Drugs, Dominion, Thrifty and Save-On Foods. Wal-Mart Canada offers in-store plastic bag recycling at all but three of its 309 stores across the country.

Ontario has been a bit slower on the uptake, but the situation changed dramatically over the last couple of years. Today, there are major retailers who have come onboard, including A&P, Loeb and Wal-Mart.

Canadians are doing their part to ensure that plastic bags are getting recycled. Information from a Decima Research study shows that 81 percent of Canadians would participate in retail in-store programs for recycling plastic bags if such facilities were made available. The partnership work underway is ensuring that such facilities exist all across the country.

The Environment and Plastics Industry Council (EPIC) has a separate website dedicated to plastic bags. The website ([www.myplasticbags.ca](http://www.myplasticbags.ca)) offers information about plastic bags and recycling, including a database of stores across the country that offer at-store recycling programs.

### **Technology keeping pace**

The Canadian market is seeing increased availability of plastic bags for recycling into new applications such as composite lumber (used for decking, railing and other 'lumber' applications), drainage pipes, garbage bags, garden edging and trays, and the list goes on. There is also increased capacity in the market to recycle the bags.

Elmira-based EFS-plastics Inc., for example, a relative newcomer to the Ontario landscape of plastic bag recycling, uses proven German proprietary technology to currently process approximately 6,000 tonnes of post-consumer plastics annually, the majority of which is plastic bags and film. Corporate expansion plans, however, see the

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addition of a second and third line over the next two years. This would bring the company's plastic bag and film recycling capacity to more than 18,000 and 22,000 tonnes respectively per year.

EFS-plastics began its Ontario operations in early 2008. Already, the company

has seven full-time and two part-time employees, and has recorded sales of close to \$500,000 in the first six months of 2008.

#### **Toward a smaller footprint**

With so many partnerships working together to make plastic bag recycling easy and convenient, there are far

fewer bags ending up in landfill. This improved diversion, coupled with increased attention on the part of consumers, will help spur Canada's plastic recycling infrastructure and will fuel new opportunities and end markets.

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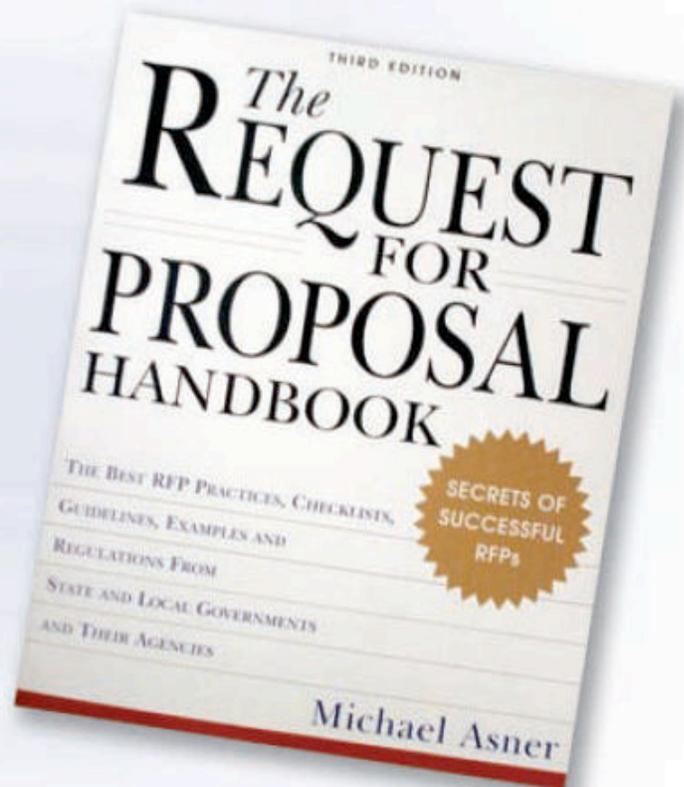
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