

New compostable film products

As a leader in manufacturing safer, more environmentally friendly corrosion inhibiting solutions for industries involving metal, Cortec® Corporation has put additional effort into offering a fully compostable film for basic packaging. Eco Film® is certified compostable according to EN 13432 (DIN Certco) and ASTM D6400 (BPI). When exposed to a typical commercial composting environment, it will fully biodegrade into carbon dioxide and water within a matter of weeks, without introducing toxicity to the soil, plants, or microorganisms involved in the process. Eco Film is helpful for organic waste diversion and can also be used in a variety of packaging applications where waste reduction is a concern.

A common challenge in developing biodegradable, compostable, or bio-based films has been balancing eco-friendliness with adequate physical strength for use. As many regions around the world adjust waste disposal viewpoints and regulations and seek to reduce the use of low and high density polyethylene bags, Eco Film provides a physically stable compostable alternative to standard plastic bags. Eco Film shows good shelf and curb stability because it is designed to only disintegrate when placed in contact with the correct temperature and microorganism-containing material, such as the waste, soil, and compost found in a commercial composting environment. Left on the shelf in its original packaging, it remains good for two years.

As early as 2002, a manufacturer of specialty cleaning and MRO application chemicals tried Eco Film as a packaging material. Their previous attempt to use PLA bags had resulted in chemical spills, and the company was looking for a biodegradable film with enough strength to avoid tearing and disintegration. Eco Film fulfilled these requirements with the added benefit of being heat sealable [1].

Around the same time, a trial of Eco Film was performed in California, a state in the USA known for stringent environmental standards. The tightening of state and local organic waste disposal standards increased the importance of finding an efficient and cost effective waste collection method for one of California's major cities. Bagged waste was found to be the easiest to collect; however, the bags presented a source of non-compostable waste. Eco Film bags were evaluated as a compostable alternative. The Eco Film bags degraded as indicated and exceeded criteria for strength and usability [2].

In the following decade, as interest in waste reduction programs grew, a large zoo in Cortec's home state of Minnesota, USA, decided to start a composting program to reduce landfill material by diverting food waste. A variety of compostable plastics were tried, and Eco Film was chosen for use because it met all requirements and was produced by a fellow Minnesota organization [3].

Potential uses for Eco Film are manyfold, ranging from compostable packaging for chemical companies to non-contaminating collection bags for organic waste disposal. The options are even greater due to the availability of Eco Film in a variety of compostable sizes and forms, ranging from 12.5 to 120 µm (0.5-4.8 mils) thick and customizable to single wound sheeting, bag-on-roll products, center folds, gusseted tubes, and more.

While many of Cortec's products are targeted to the corrosion inhibiting industry (including its compostable Eco-Corr Film®), the creation of Eco Film is another example of Cortec's environmentally-friendly consciousness, as Cortec seeks to not only meet the corrosion inhibiting needs of its customers, but also to present viable options for waste reduction.^{MT}

References:

- [1] Cortec Corporation: "Cortec Case History 207." March 2002. <<http://www.corteccasehistories.com>>. 2 May 2017.
- [2] Cortec Corporation: "Cortec Case History 221." September 2002. <<http://www.corteccasehistories.com>>. 2 May 2017.
- [3] Cortec Corporation: "Cortec Case History 396." August 2011. <<http://www.corteccasehistories.com>>. 2 May 2017.

 www.cortecadvancedfilms.com

