

# Eco Works<sup>®</sup> Compostable Films & Bags Patented

### **PRODUCT DESCRIPTION**

Eco Works is a range of formulations, not a single product and can be customized to your precise needs. Designed with the environment in mind, Eco Works contains renewable raw materials ranging from 5 - 45%, depending upon the formulation. Designed to replace traditional low density and high density films, Eco Works is suitable for applications such as: checkout bags (T-shirt and flat), lawn and leaf bags, organic waste diversion, and other industrial and commercial uses.

All Eco Works formulations are certified compostable per ASTM D6400 and EN 13432 and can carry the BPI/USCC logo and the DIN CERTCO mark of conformity. The exact time needed for Eco Works products to biodegrade is dependent upon the conditions and activity of the disposal environment (temperature, soil quality, activity of microorganisms). When placed in a typical commercial composting environment, Eco Works films will fully biodegrade into carbon dioxide and water within a matter of weeks. There is no ecotoxicity to the soil, plants or microorganisms involved in this process. Since microorganisms are the means for biodegradation, Eco Works is shelf and curb stable and will retain its integrity until disposed of properly.

Eco Works films can be curtailed to meet the requirements of your application ranging from flexible to rigid films. Mechanical properties for various formulations are outlined in the table below.

#### FEATURES

- Renewable content (5-45%)
- Contains NO POLYETHYLENE
- Leaves no residue in finished compost
- Superior strength, shelf-life, and curb-life
- Comparable to HDPE
- Biodegrades at the same rate as common organic material when disposed of properly
- Conversion to CO<sub>2</sub> and H<sub>2</sub>O in weeks under commercial composting
- Ideal for restaurants, schools, curb-side programs, and agricultural uses
- Conforms to ASTM D 6400 and EN 13432
- Approved by BPI/USCC and DIN CERTCO
- Can carry BPI/USCC logo and DIN CERTCO mark of conformity

Eco Works Mechanical Properties						
Property		Test Method	Units	Eco Works 10	Eco Works 30	Eco Works 45
Caliper		ASTM D6988	mil	3.00	1.00	1.40
Breaking Factor	MD	ASTM D882-02	lbs/in	13.88	5.56	8.38
	TD			15.04	5.27	6.75
Tensile Strength at Break	MD	ASTM D882-02	psi	4206.70	5858.50	5917.60
	TD			4852.90	5545.50	4631.30
Elongation at Break	MD	ASTM D882-02	%	609.84	310.34	161.72
	TD			749.63	554.33	333.28
Yield Strength	MD	ASTM D882-02	psi	1886.41	2704.33	2911.55
	CD			1716.83	1505.53	2918.08
Tear Strength	MD	ASTM D1922-06a	mN	6184.22	706.32	361.01
	CD			1695.17	588.60	659.23
Dart Drop Impact Resistance		ASTM D1709-04, Test Method A	grams	N/A	761.41	87.10

Typical properties represent average laboratory values and are intended as guides only, not as specifications. Film properties are typical of blown film extruded at a blow up ratio of 2:5:1, but are dependent upon operating conditions.



Eco Works<sup>®</sup> is intended to be disposed of in a commercial composting facility. Check to see if facilities exist in your area.

## Laboratory Compostability Study



t = 0



t = 62 days



t = 76 days





t = 93 days



t = 43 days



t = 112 days

## FOR INDUSTRIAL USE ONLY KEEP OUT OF REACH OF CHILDREN KEEP CONTAINER TIGHTLY CLOSED NOT FOR INTERNAL CONSUMPTION CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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