



Eco Works® 70

Bio-based, Biodegradable & Compostable Films, Bags, & Masterbatch Patents Pending



PRODUCT DESCRIPTION

Eco Works 70 Bio-Based, Biodegradable & Compostable products are specifically designed to replace non-degradable, oxo-biodegradable and other polyolefin-based products for a wide range of applications. Compared to HDPE, LDPE, and LLDPE products, Eco Works 70 has improved strength while adhering to strict guidelines for commercial compostability as detailed in ASTM D 6400.

Eco Works 70 is heavily composed of corn-based resin resulting in flexible films ideally suited to pair with PLA-based rigid containers and products. Unlike "starch" containing bags, the corn-based polymer used in Eco Works 70 has strength, temperature, and moisture resistance equal to or greater than non-degradable polyethylene.

Eco Works 70 is available in standard forms; semi-rigid sheeting, thin gauge flexible films, and bags. Versions of Eco Works 70 are also available for some shrink film, food contact, and pouching/lidding applications.

Eco Works 70 masterbatch is also made available for select applications and is suitable for many molded, thermoformed, or laminated applications.

COMPOSTERS

Eco Works 70 offers improved sustainability and reduced reliance on petroleum-derived raw materials, compared with other biodegradable/compostable films currently available. Eco Works 70 is translucent allowing easy visual inspection of contents.

Eco Works 70 has been certified as commercially compostable per ASTM D 6400 and can carry both Din Certco and USCC/BPI logos. Once disposed of in a well run commercial compost facility, Eco Works 70 products will convert effortlessly and naturally into carbon dioxide and water within a few weeks.

While in use, Eco Works 70 films and bags are capable of holding wet, hot organic material for longer periods of time than starch-containing films and bags. This often results in longer curb-life and useful life for many customers.

INDUSTRIAL and AGRICULTURAL

Eco Works 70 is specifically designed to meet the rigorous requirements placed on agricultural and protective industrial films. Compared to polyethylene films, Eco Works 70 offers equal or greater physical properties including puncture and tear resistance. Eco Works 70 can be used for retention, barrier and weed suppression films as well as replacing polyolefin resins for thermoforming, laminating, pouching, and molding.

FEATURES

- 100% Biodegradable and Compostable per ASTM D 6400 (Standard specification for commercially compostable plastics)
- Contains NO POLYETHYLENE
- Leaves no residue, dust, metals, or fragments in finished compost
- Majority of composition derived from biobased sources
- Improved clarity over most biodegradable/compostable flexible films



- Biodegrades under commercial compost conditions within weeks
- Can carry Din Certco (IBAW mark) and/or USCC/BPI logos to ensure 3rd party confirmation of compostability (certificates available upon request) and easy identification/separation
- Manufactured in Minnesota by Cortec Corporation (ISO 14001, 9001 certified manufacturer)
- BEES Analysis completed, documenting the reduced environmental fast print
- Biobased content confirmed by Iowa State University

TECHNICAL INFORMATION

Eco Works 70 is a high-performance, unique blend of compostable polyesters. The majority of the composition is derived from a semi-rigid corn-based polyester. The improved rigidity over straight polyester or starch-polyester formulations allows unique properties including improved gloss, contact clarity, strength and tear/puncture resistance (both directions). Additionally, the rigidity from the corn-based polyester allows stand-up pouches, handle bags, drawtape closures, and several other unique functional attributes.

Under typical well run commercial compost conditions (microorganisms, turning, heat, moisture) Eco Works 70 products will be directly consumed by microorganisms and show visual change within several days. Complete conversion to carbon dioxide and water typically occurs within a few weeks.

Until the film is exposed to microorganisms, Eco Works 70 products will retain their original physical properties. Heat and moisture alone are not sufficient to cause

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

biodegradation, allowing Eco Works 70 to contain hot, wet material for long periods of time—essentially until the materials contained within the film/bags begin to biodegrade.

SHELF LIFE

As described above, Eco Works 70 is a shelf stable product. Until the products are exposed to microorganisms or commercial composting conditions, they retain original physical properties and strength.

FOOD CONTACT

The materials used in the production of Eco Works 70 are approved for many food contact applications. However, due to the unique and varied demands of food packaging regulations, please contact Cortec for more precise information on the suitability and approval of Eco Works 70 for food contact applications.

MECHANICAL PROPERTIES

| Material | Breaking Factor, ASTM D-882 (lbf/in) | Tensile Strength at Break, ASTM D-882 (psi) | Tensile Strength at Peak, ASTM D-882 (psi) |
|---|--------------------------------------|---|--|
| Eco Works 70 | 3.89/8.13 | 2989.89/6477.10 | 3036.01/7034.10 |
| Competitor "Starch-based" biodegradable/compostable films (1-mil) | 2.01/2.69 | 1318.7/2748.2 | 2054.6/2884.6 |

*Mechanical property testing is provided for comparison purposes only. There can be wide ranges of physical properties actually attained due to the formulation, manufacturing techniques, thickness, and other factors selected. Comparisons to non-Cortec products are based on testing conducted by Cortec Laboratories during the development of Eco Works 70 and may not represent typical or current results attained by other manufacturers.

LIMITED WARRANTY

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