WELLS
Performance Materials

Biodegradable Additive Masterbatches for Polymers

reverte™

Wells Performance Materials
Providing Solutions...Adding Value

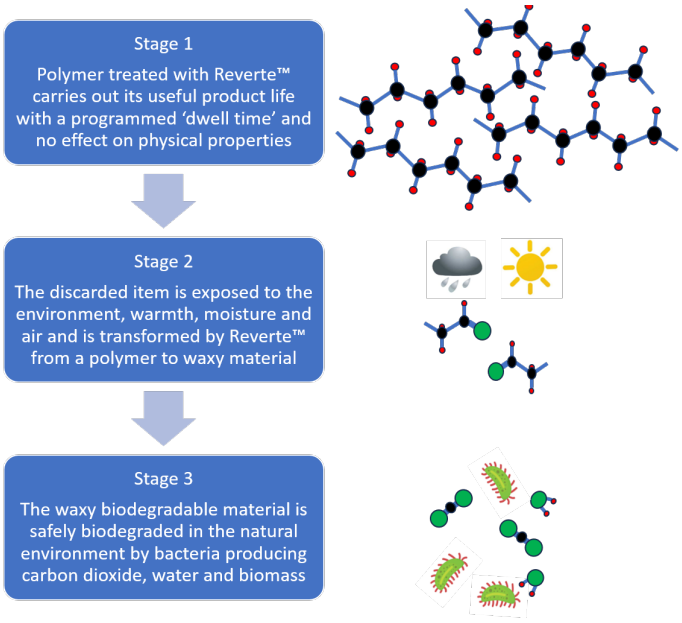
Biodegradable Additive Masterbatches for Polymers

Making Ordinary Plastics Biodegradable*

Reverte™ is a family of products which, when added to a range of commonly used polymers makes them ultimately and safely biodegradable.

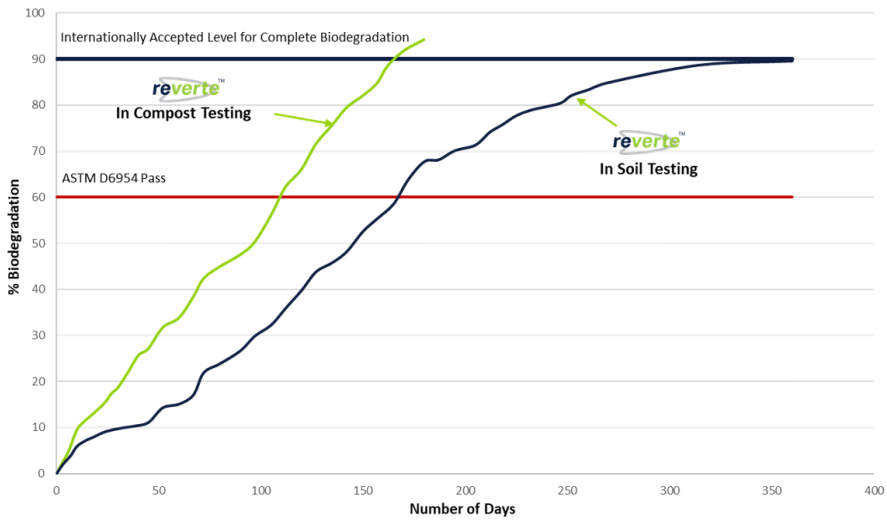
The Process

- Oxidation of the polymer due to heat/light in the open environment.
- Mw reduction; structural/chemical changes; loss of mechanical integrity, which under the action of wind/rain, causes a transformation into waxy, non-plastic materials.
- The molecular weight of this new material is greatly reduced to between 4,000 and 10,000 Daltons and is now biodegradable within the environment.
- This waxy biodegradable material can be used as a food source by microbes safely and harmlessly biodegrading the material, converting the carbon to CO_2, water and biomass (growth).
- Reverte™ has been independently tested to ASTM D6954-24 confirming its performance as a biodegradable additive to polyethylene, polypropylene and PET films and that it is both safe and does not produce microplastics.



Reverte™ treated polyethylene film has been tested under ASTM D6954-24 conditions by an independent laboratory.

Tier 2 testing was conducted both to ASTM D5338 and ASTM D5988 over a 180-day and 360-day period respectively, the results confirm biodegradation ≥ 90%, meeting the internationally accepted level for complete biodegradation.



The level of proven biodegradation as a result of Reverte™ transforming the polyolefin to low molecular weight biodegradable materials demonstrates that no microplastics are formed.

Reverte™ has been independently tested and proven to safely biodegrade polyethylene, polypropylene and polyester films in accordance with ASTM D6954-24, producing CO_2, H_2O and biomass, it does not produce microplastics.

Reverte™ treated films have been shown to have no toxic effects when tested in accordance with OECD 207 & 208.

Reverte™ is approved for use in food contact applications according to EU and FDA legislation.

Reverte™ does not contain heavy metals such as those prescribed by EN13432 and RoHS3 such as but not limited to, cadmium, chromium (VI) lead or mercury.

Reverte™ containing films are suitable for both mechanical and chemical recycling.

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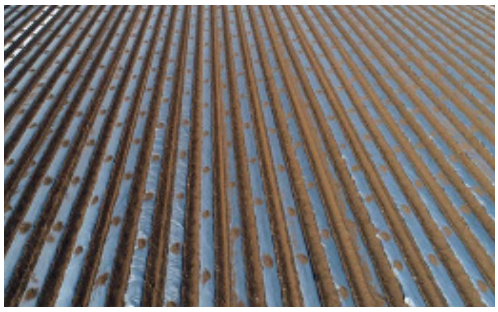
Applications

Biodegradable Checkout Bags



Biodegradable Agricultural Mulching Films

Biodegradable Flexible Films and Laminates

Benefits of Reverte™

- Reduces impact of litter in the environment
- Does not produce microplastics
- Adds value to products and brands
- Small addition, generally 1%
- No modification or investment in machinery required for manufacturers
- Cost effective method of enhancing the environmental credentials of plastics
- Allows all the performance aspects of your polymer blend to be maintained
- Supported by Wells PM Innovation Centre and Manufacturing facility
- Wells PM is globally recognised as the technical leader in the field

Treatable Materials

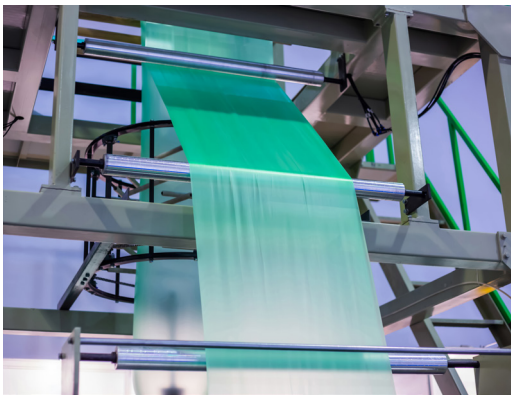
Polyethylenes
- HDPE
- LDPE
- LLDPE

Polypropylenes
- PP Homopolymer
- PP Copolymers

Polyesters
- PET

Processes

- Blown Films
- Cast Films
- Biaxially Orientated Films
- Laminated Films
- Polymer Coating
- Metallised Biaxially Orientated Films
- Fiber Extrusion
- Spunbond Extusion



Standards

Wells PM holds the Technical Lead for the development of Standards in sub-committee D20.96 for polymers that 'biodegrade in the environment', responsible for ASTM D6954-24, a landmark Standard Guide for Exposing and Testing Plastics that Degrade in the Environment by a Combination of Oxidation and Biodegradation. It recognises the variability of the conditions in the open environment, not imposing artificial time-frames on the various aspects of the biodegradation processes characterised in the laboratory testing environment.

علامة الجودة الإماراتية
Emirates Quality Mark

علامة الجودة
SASO
QUALITY MARK

ASTM

*The marketing claims which can be made about biodegradable materials may vary from country to country and in some regions may be legislated through trade and consumer bodies. In some regions 'green claims codes' may restrict how the benefits of the Reverte™ biodegradable technology can be described or depicted in marketing claims. It is the responsibility of the end user to satisfy themselves that they are marketing the product in line with the market destination for which the product is intended. Wells Performance Materials cannot be held responsible for the incorrect marketing of end products by users of the technology and we recommend that all marketing statements are checked by lawyers familiar with the local legislation.

WELLS
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reverte™ BACTIglas™ Compol™94

WELLS LITE WELLS AID

WELLS SCENT WELLS BLOCK WELLS CLEAN

WELLS STAB WELLS SLIP WELLS STAT WELLS BIO

WELLS FREE WELLS DRY WELLS FLAM

SILVER | Top 15% ecovadis Sustainability Rating MAR 2025

JOSCAR REGISTERED

ISO 9001 Certificate No. GB2005462

ISO 14001 Certificate No. EM2000992

Wells Performance Materials Ltd
Emerald Way
Stone Business Park
Stone, Staffordshire, ST15 0SR,
United Kingdom

Tel: +44 1785 817 421
Email: sales@wellspm.com

www.wellspm.com
www.revertebio.com