



Biodegradable, Compostable, and Certifications:

Understanding the Nuances

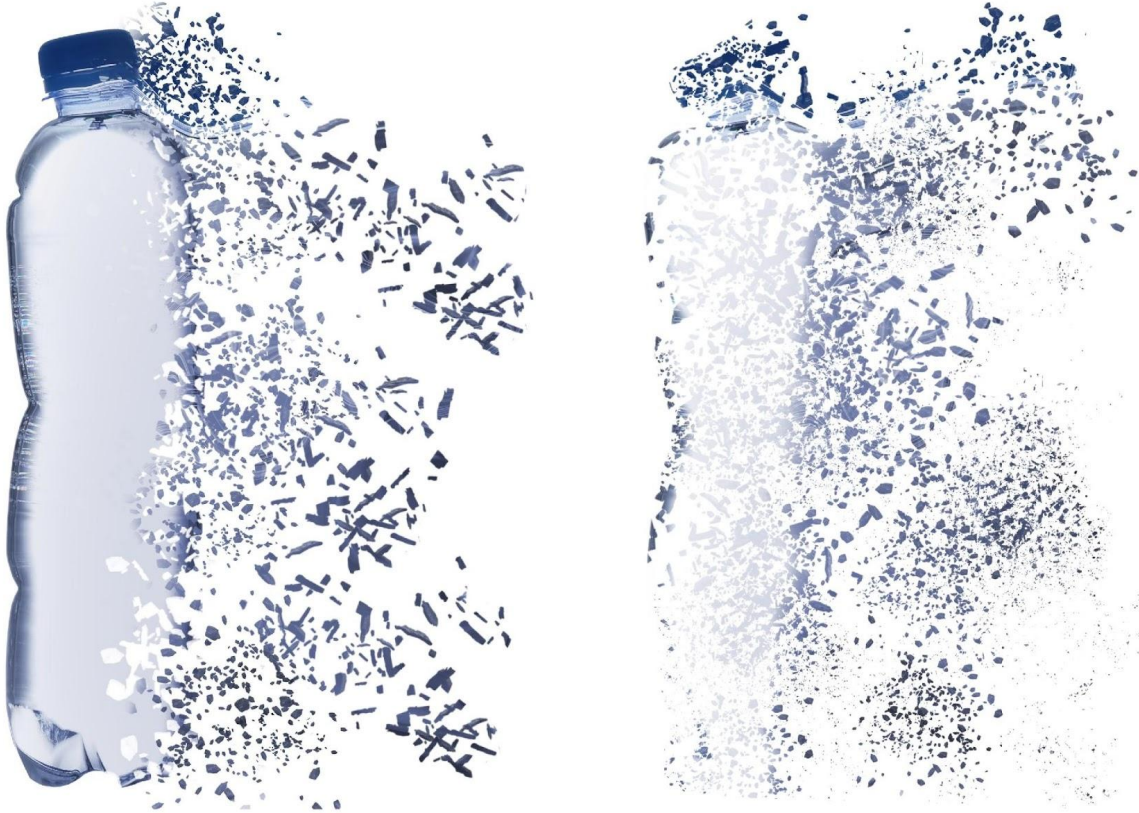
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LEXICON

WHAT IS DEGRADABLE ?



General term that encompasses any material or substance that can undergo a **process of breaking down or decomposition**.

This can **include both biodegradable and non-biodegradable materials**

The term "degradable" does **not specify a timeline or environmental effect** of the degradation.

WHAT IS BIODEGRADABLE ?

Can be **broken down by naturally occurring microorganisms** such as bacteria and fungi.

Biodegradable materials do **not necessarily have a specific timeline** for degradation and may break down at varying rates depending on environmental conditions.

A product labeled as biodegradable **without any further context** is vague and **ambiguous** to consumers.



WHAT ABOUT COMPOSTABLE ?



Compostable materials are **typically biodegradable** but are engineered to **break down more quickly and completely** in **composting facilities**, usually within a **defined timeframe**.

They should **not leave any toxic residues** behind and contribute to the **creation of nutrient-rich** soil.

WHAT'S THE DIFFERENCE?



Those terms are sometimes used loosely or interchangeably which leads to **confusion**.

To ensure that a product or material meets **specific environmental goals**, it's essential to **understand the specific characteristics, standards, regulations and certifications associated** with each term.

WHAT GROWERS NEED ?

BEST OF BOTH WORLDS

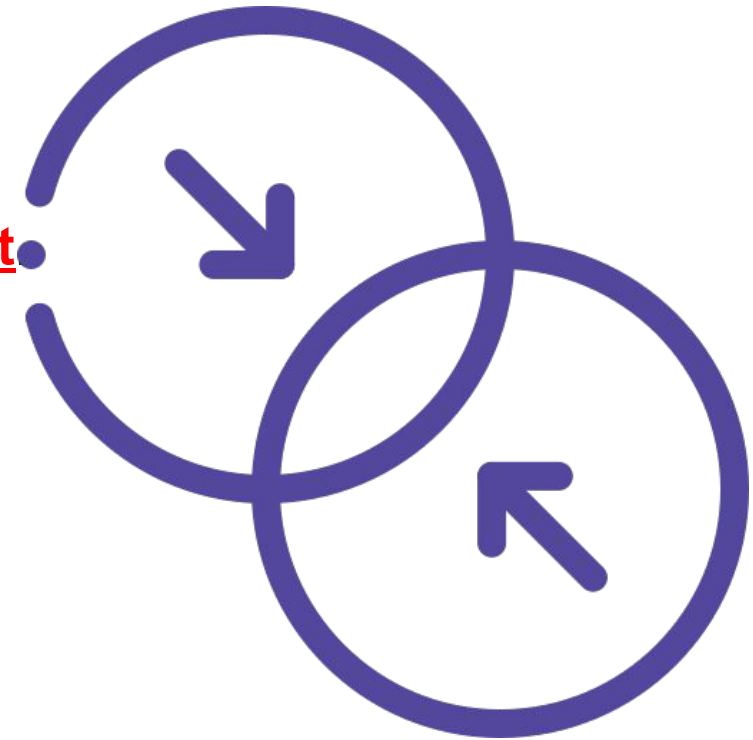
Biodegradability

To be able to **achieve degradation in a specific timeframe** – for **example 6 months** – attainable in the **soil or farming environment**.

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Composability

To be able to decompose and turn into CO₂ and Water **without** leaving **any environmental effects**.





STANDARDS AND REGULATIONS



CERTIFICATION SPECTRUM

INDUSTRIAL COMPOSTIN



ASTM 6400 EN 13432

THERMOPHILIC

Between 55 and 60 °C
(131 and 140F)

3-6 Months

HOME COMPOSTIN



ASTM (NONE) EN 13432

MESOPHILIC

between 35 and 37 °C
(95 and 99F)

4 Months – 2 Years

OPEN ENVIRONMENT



ASTM (NONE) EN 17033

AEROBIC

between 20 and 28 °C
(68 and 82F)

Within 2 Years

STANDARDS

CONDITIONS

TEMPERATURE

TIMEFRAME



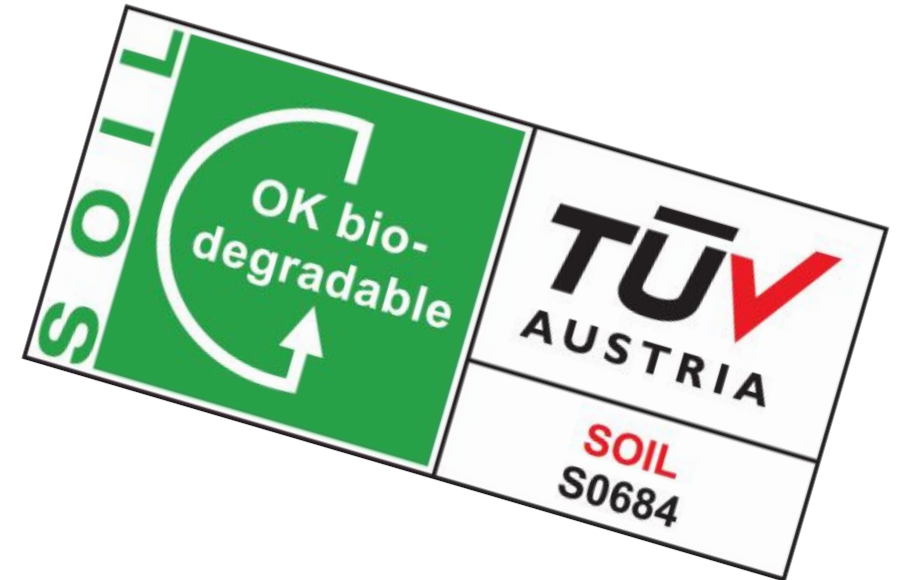
THE SPECIFIC MULCH FILM CERTIFICATION

Certification for biodegradable mulch films, materials and intermediates according to **DIN EN 17033**.

What **tests** are required to qualify for an **OK biodegradable SOIL** certificate?

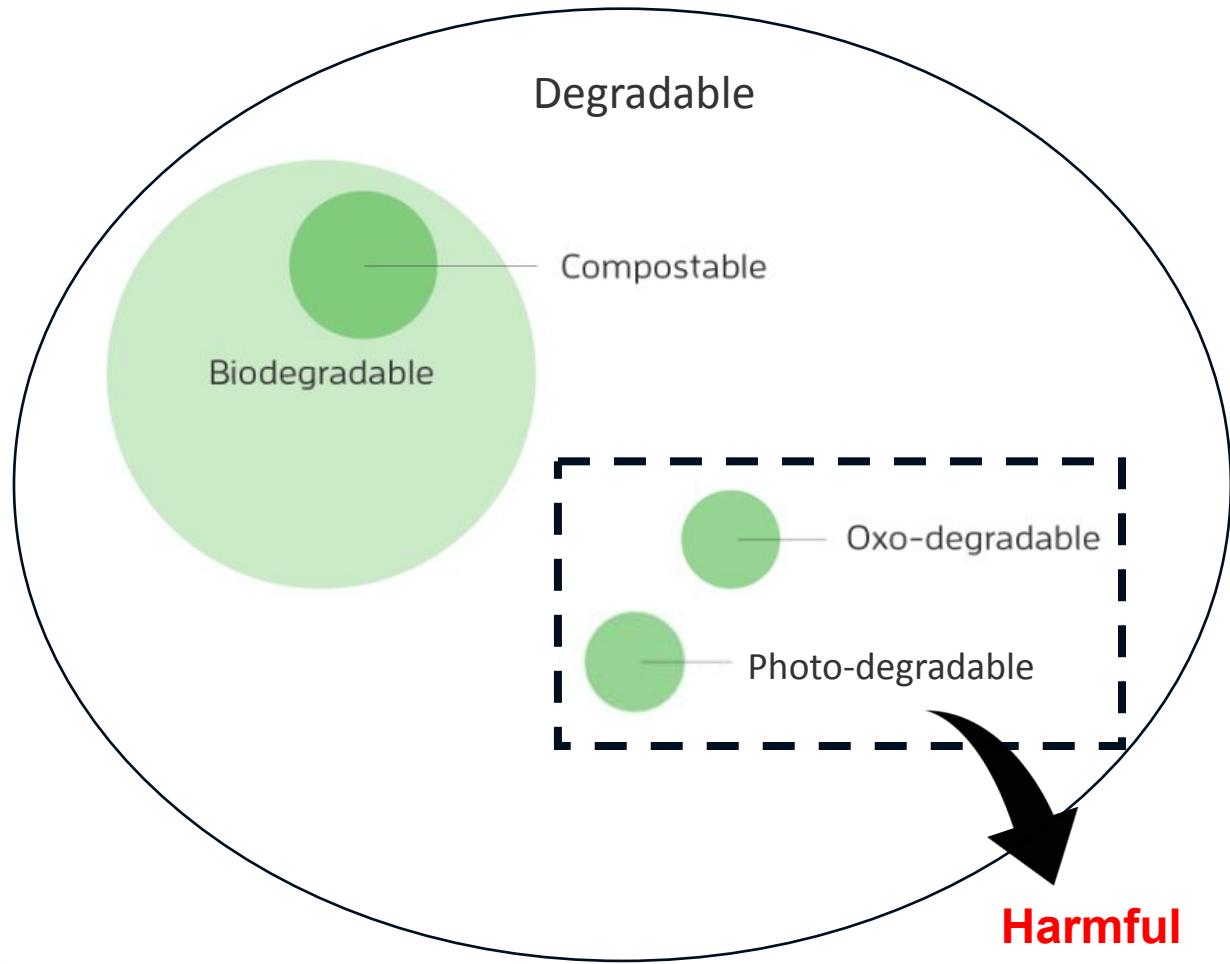
In addition to a clear and detailed product description, **three tests** are required:

- test on **biodegradation** (chemical break down of the polymer)
- test on **ecotoxicity** (test if the decomposed product does **not exert any negative effect on plants**)
- test on **heavy metals content**



Reminder: Check certification records to verify product testing and validity

WHAT ABOUT OXO AND PHOTO-DEGRADABLE ?



These degradable plastics contain chemicals or additives that, under the right circumstances, will help the plastic to decay faster. In most cases, this plastic **needs light and oxygen to begin decomposing.**



3 years after oxo-degradable mulch application, Everett, WA, Photo by Andy Bary

ABOUT

POLY
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ABOUT US

Manufacturing high-quality film **since 1979**

- PolyExpert is a **leading polyethylene film manufacturer** that specializes in extrusion film using a blown process.
- Our **technical expertise**, combined with our **meticulous production process**, means our clients can feel confident that they will receive high-quality products each and every time.
- PolyExpert has been producing and selling **Mulch films for more than 25 years (1995)** and **BDM (BioDegradable Mulch) for more than 10 years (2013)**
- Our **outstanding customer service** allows our clients to enjoy complete peace of mind.



OUR HIGH-QUALITY MULCH FILM



BIOGUARD

SAVE TIME, MONEY AND YOUR LAND!



Weed Control



Crop quality improvement



Increased crop yield



Labor Savings



Non-Toxic



Moisture Conservation



Reduction in chemical usage



Acceleration of crop maturation

OUR HIGH-QUALITY MULCH FILM

POLYEXPERT BIOGUARD is a North American-produced mulch film manufactured from Novamont's certified biodegradable and compostable bioplastic, **MATER-BI**, compliant with the European standard UNI EN 17033



**"Resin Certification: Good.
Product Certification: Right."**



POLYEXPERT previously made BDM for a private label. Now, we've launched our own brand to offer top-quality products consistently. Our product is **FULLY** certified.



GENERAL GUIDELINES FOR BDM

- **SOIL PREPARATION** – The soil **must be loose and refined, without large rocks, lumps, or sharp/edgy objects**, to prevent risk of tears
- **Avoid overstretching** of the film by using applicators with worn out bushings, rotators / idlers / rolls
- Machine rolls have to be **“completely” free-flowing**
- **LAYING** – **Avoid laying on wet soil** as it may cause the press wheels to sink. **Sideways overstretched film** may lead to premature tearing
- The mulch film must be **properly tucked** to avoid any wind damage
- **Do not lay the film immediately after** bed top organic **fertilization**. It could affect the biodegradation due to the high content of microorganisms in organic fertilizer.



Too much tension will lead to stretching of the film and might cause premature degradation



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**POLY
EXPERT**

YOUR TRUSTED SOURCE FOR
**BIODEGRADABLE
AND REGULAR MULCH FILM**

**BIO
GUARD
POLYEXPERT** **SUN
GUARD
POLYEXPERT**



Thank you,



The logo features the word "POLY" in a large, bold, white sans-serif font. A stylized white wheel with a black center is positioned over the letter "O". Below "POLY" is the word "EXPERT" in a smaller, bold, white sans-serif font, followed by a registered trademark symbol (®).

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