



Striving for a Healthy Packaging

COMPOSTABLE - BIO BASED

wrap the world



Which functional properties should the film deliver in your application ?

Description	Barrier	Lok seal	SIT	Seal Thru Contamination	Hot Tack	Puncture resistance	Tear Resistance	Code
MONOFILM								
Thin Monofilm	Yes	Yes	Std	No	Std	Std	Std	RPACKC KCF – KCFW - KCFM – TNZ
Thin Monofilm	No	Yes	std	No	Std	Std	Std	RPACKC TNS
LAMINATED FILM								
Basic	No	Yes	Std	No	Std	Std	Std	RPACKC TNSNS – TNSNW
Good performance	Yes	Yes	Std	No	Std	Std	Std	RPACKC KCFVSW – KCFKM - KCFDN – TNSZSM – TNSD1W
High Performance	Yes	Yes	Very low	Yes	Yes	High	Std	RPACKC3 KCFMXSB – TNSMXSB
Peel	Yes	Peel	Std	No	Std	Std	Std	RPACKC3 KCFMXSB EL - TNSMXSB EL

WHY COMPOSTABLE?

Everybody is talking about sustainability and our proposal of Compostable material can be the answer.

Based on renewable resources, certified as compostable in both industrial and home composting environments, also suitable for anaerobic digestion it provides:

- Excellent moisture barrier
- Excellent barrier to gases, aromas and mineral oil
- Controlled slip and naturally anti-static for enhanced machinability
- High level of stability and durability
- Superior gloss and clarity
- Strong seals
- Can be laminated to other 'bio' materials to improve technical functionality and hermetic seals
- Suitable for single, double or three layer constructions

KEY MARKETS

Chocolate - Biscuit & Bakery – Confectionery - Crisps/Chips - Dried Foods - Coffee

SOMETHING TO KNOW ABOUT COMPOSTABLE

Context and objective:

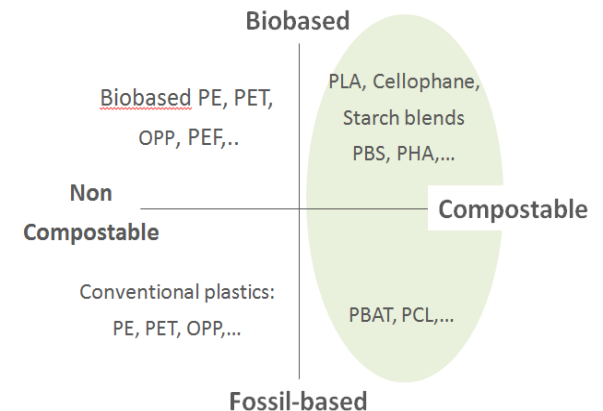
- Compostable packaging means that it can be disposed in a compost and will degrade into carbon dioxide and biomass.
- Compostable packaging can potentially allow to recover organic materials that are perished or that stay in the packaging after use, such as fresh products (salads) or coffee (capsules).

Customer benefits:

- Improve soil quality by recovering organic materials contained in the packaging that would otherwise be incinerated or landfilled

Limitations:

- Risk of deception of consumers trying to compost industrial compostable packaging in their home compost since the conditions (temperature, moisture) will not enable composting of packages.
- Packaging does not provide nutrients to the compost if the packaging is empty with no organic materials
- Difficult to differentiate with conventional plastics and industrial composters might sort out compostable packaging as they do for conventional packaging.





WHY BIO BASED?

A new generation of biodegradable films made by renewable resources (PLA bio-based resin and PE bio-based resin) with the aim to drive the flexible packaging industry towards more sustainable solutions and offer consumers the possibility to choose natural products and contribute to the reduction of green house gas emissions and post consumer waste.

Certified as bio-based origin and compostability. they provide:

- High mechanical strength
- Excellent barrier to mineral oil
- Good antifog properties
- Superior gloss and clarity
- Strong seals
- Can be laminated to other 'bio' materials to improve technical functionality and hermetic seals
- Suitable for single, double or three layer constructions

KEY MARKETS

Fresh Food - Biscuit & Bakery

SOMETHING TO KNOW ABOUT BIO BASED FILMS

Context and objective:

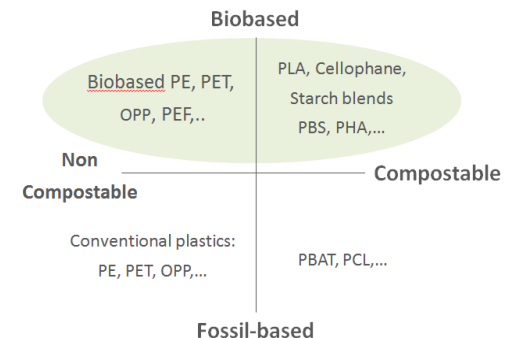
- Bio-plastics are made of renewable feedstock (like sugar cane...), as opposed to depletable petrol raw materials.

Customer benefits:

- Significant reduction of the carbon footprint
- Drop-in bioplastics can replace conventional materials with limited change in the flexible packaging structure. Bio-based PE behaves like PE (only its source is different, but the chemistry and properties are the same)
- Bio-based PE film is recyclable like fossil-based PE film.

Limitations:

- Some preconceptions around competition for agricultural land versus edible food
→ Second generation bio-based resins use non-edible parts of the plants.
- End-of life consideration remain the same with bio-based films compared to fossil-based film (PE is recyclable, other polymers may not be).



WHY COMPOSTABLE + BIO BASED?

Sustainability, barrier, high performances are the questions that our R&D team wants to answer.

We have tested a combination between Compostable material and Bio based material.

Finally a new material is born.

Two layers based on renewable resources, certified as compostable in both industrial and home composting environments, laminated with one layer of new generation of biodegradable films made from renewable resources (PE bio-based resin), it provides:

- Excellent moisture barrier
- Excellent barrier to gases, aromas and mineral oil
- High level of stability and durability
- Strong seals, peel available
- Suitable for single, double or three layer constructions
- Available in: transparent, metallized and white

KEY MARKETS

Chocolate - Biscuit & Bakery – Confectionery - Crisps/Chips - Dried Foods – Coffee