

Impact of PPWR on compostable packaging in Europe

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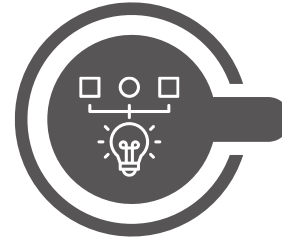
Division Manager; Normec OWS

Composting, Disintegration and Environmental Safety

October 1st, 2026

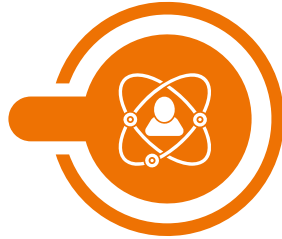


**Intelligence partner
& testing lab**



Actively participating in industry initiatives, European subsidy projects & conferences

More than **35 years** of experience



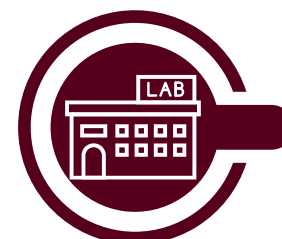
World's biggest capacity
3.500 test reactors
= short lead time

Strictly independent
No conflict of interest



Recognized by
all certification bureaus
worldwide

Member of several
standardization agencies



Operating from **Two Labs**:
Europe & the US to support
Customers **Worldwide**

PPWR (Packaging & Packaging Waste Regulation)

(Regulation (EU) 2025/40)

Objectives

- Make all packaging on the EU market **recyclable in an economically viable way by 2030**.
- **Safely increase** the use of recycled plastics in packaging.
- **Decrease the use of virgin materials** in packaging and put the sector on track to **climate neutrality by 2050**.
- **Improve recycling**.

The EU's waste priority order



40%
of plastics used in the EU are in
packaging

PPWR

What is a regulation?

- Shift from Directive to a Regulation



Directive (1994)



Regulation (2025)

When is compostable packaging useful?

Compostability $\neq$ general alternative to material recycling, but only useful if well-defined conditions are fulfilled

- The use of the packaging significantly **increases the collection of organic waste** compared to the use of non-compostable packaging materials;
- The use of the packaging **significantly reduces the contamination of compost** with non-compostable packaging and does not cause any problems in bio-waste processing;
- The use of the packaging **does not increase the contamination of non-compostable packaging waste streams.**

Impact of the PPWR

Article 9: Compostable packaging

Article 9.1

Mandat
12 Febr

Article 9.2

By 12 February 2028, packaging other than referred to in article 9.1 and article 9.2, including packaging made of biodegradable plastic polymers or other biodegradable materials, shall be designed for material recycling (Article 6) without affecting the recyclability of other waste streams.

Tea b
(permeable) (permeable)

carrier bag (< 15 µm) bag (< 50 µm) beverage system
single-serve unit

Optional: Up to Member States to decide if also home compostability is required

Packaging for which the Member State already required that they be compostable before the date of application of this regulation

Impact of the PPWR

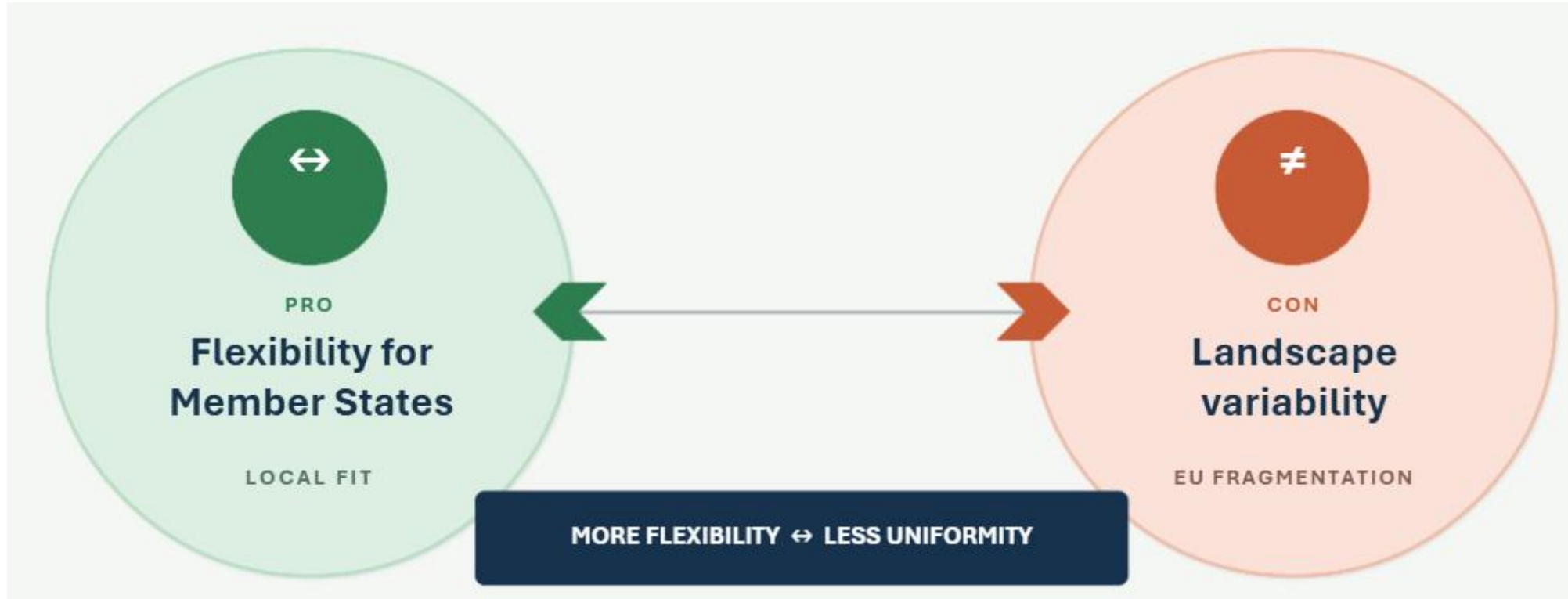
Article 25: Restricted use of certain packaging formats

From 1 January 2030, economic operators shall not place on the market following packaging:

- Single-use plastic packaging used at the point of sale to group goods
- Single-use plastic packaging for less than 1.5 kg pre-packed fresh fruit and vegetables (with some exceptions)
- Single-use plastic packaging in the HORECA sector (with some exceptions) **However, this is without prejudice to Article 9(2), point (b).** premises in the HORECA sector (with some exceptions)
- Single-use plastic packaging in the HORECA sector, containing individual portions or servings, used for condiments, preserves, sauces, coffee creamer, sugar and seasoning (with some exceptions)
- Single-use packaging for cosmetics, hygiene and toiletry products for the use in the accommodation sector
- Very lightweight plastic carrier bags (with some exceptions)

Impact of the PPWR

Consequences of Article 9.2 and Article 25?

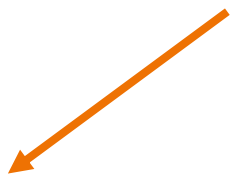


	Article	Member state A	Member state B	Member state C
	9.1	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL & HOME
	9.2 (a)		INDUSTRIAL	
	9.2 (a)		INDUSTRIAL	
	9.2 (a)		INDUSTRIAL	INDUSTRIAL
	9.2 (b) - 25			INDUSTRIAL

Impact of PPWR on standardisation

Compostable in bio-waste treatment facilities

- “The requirements of harmonised standard EN 13432:2000 should be revised with regard to composting times, permissible levels of contamination and restrictions on the release of microplastic to allow those materials to be processed in **bio-waste treatment facilities** in an appropriate manner.”



Bio-waste treatment facilities = industrial composting AND anaerobic digestion (with/without post-composting)



COMPOSTABLE
BY DESIGN
PLATFORM

FOOD WASTE TREATMENT

Dominant food waste treatment technique

- AD (stand alone)
- AD followed by post-composting
- Industrial composting
- AD (stand alone or followed by post-composting)
- AD (stand alone) or composting

Finland: 57% of municipal bio-waste treated by means of AD (with or without post-composting)

Ireland: AD (stand alone) or industrial composting

Catalonia: AD followed by post-composting is dominant technique for the future

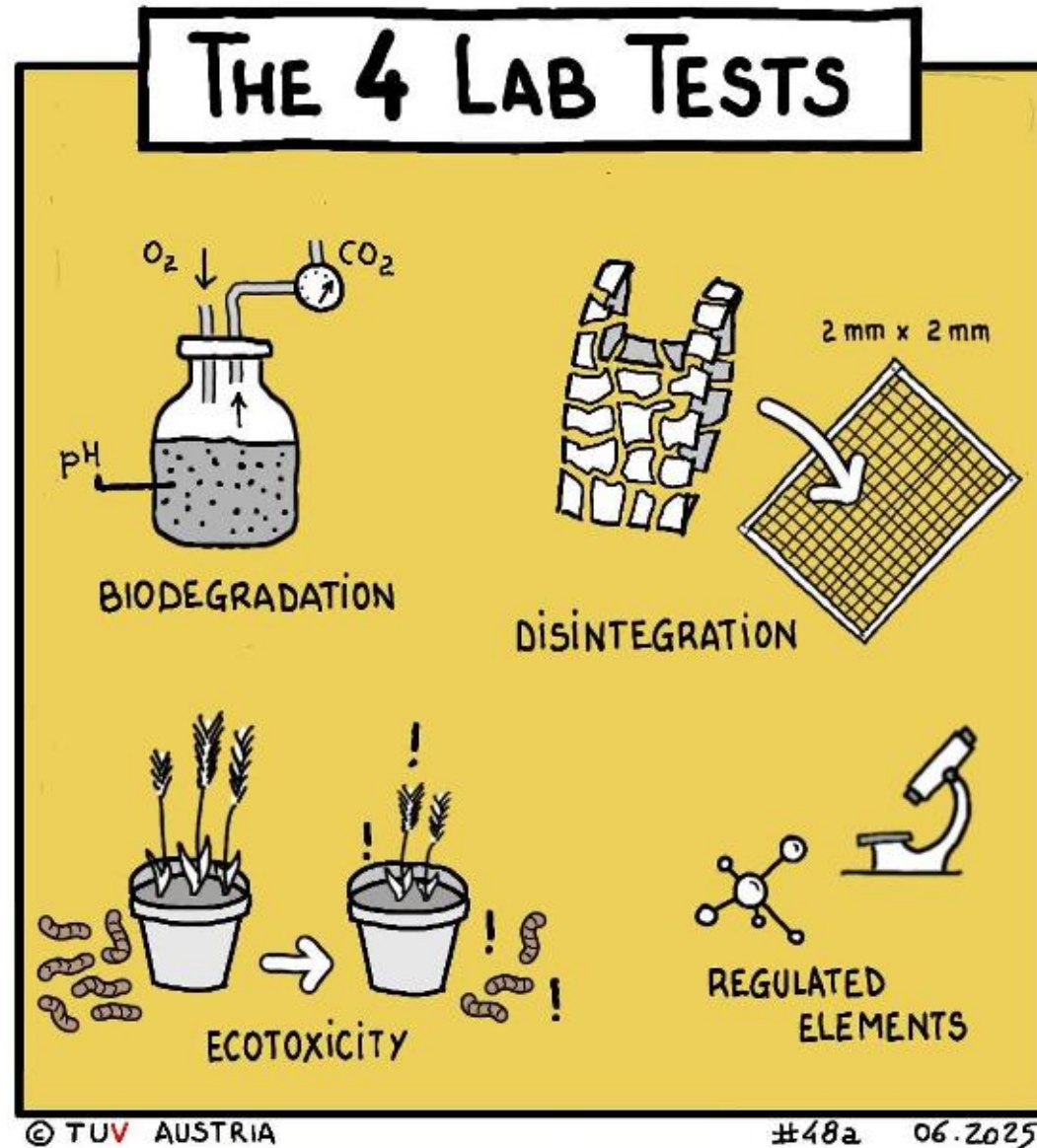
Greece: very limited collection of food waste

EN 13432 (2000)

4 pillars

90% biodegradation
(absolute or relative)
after 6 months under
industrial composting
conditions

No toxicity towards
higher plants



90% disintegration
within 12 weeks
under industrial
composting
conditions

Limit values for ash
(= inert material),
heavy metals and
fluorine

Standards

How does a revision take place?

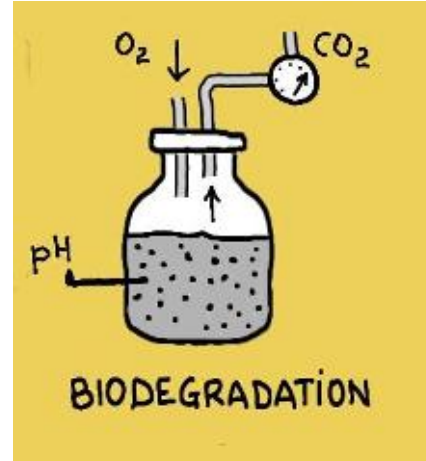


EN 13432 (20..)

Discussion items - Biodegradation

TODAY

- Aerobic only
- $\geq 90\%$ to CO_2 in ≤ 6 months
- Test item: final packaging
- Exempt:
 - Materials of natural origin
 - Organic constituents $< 1\%$, $\Sigma < 5\%$



OUTLOOK

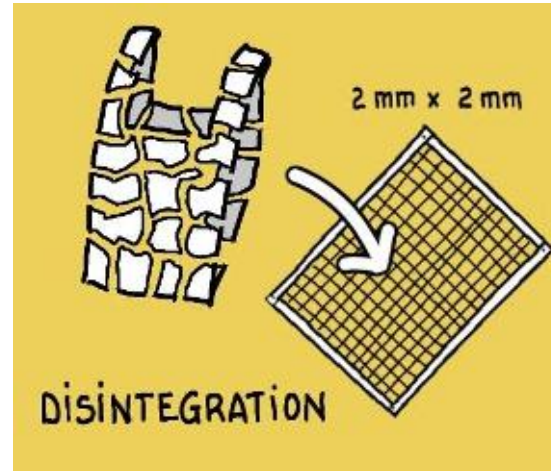
- Aerobic **and anaerobic?**
- $\geq 90\%$ to CO_2 in ≤ 6 months
- Test item: final packaging **AND constituents between 1-15%?**
- Exempt:
 - Materials of natural origin
 - Organic constituents $< 1\%$, $\Sigma < 3\%$

EN 13432 (20..)

Discussion items - Disintegration

TODAY

- $\geq 90\%$ to $< 2\text{ mm} \times 2\text{ mm}$ within 12 weeks
- No visual contamination



OUTLOOK

- $\geq 90\%$ to $< 2\text{ mm} \times 2\text{ mm}$ within **x?** weeks
- No visual contamination
- Disintegration behaviour under anaerobic conditions?
- Field testing?

EN 13432 (20..)

Discussion items - Toxicity

TODAY

No negative effect on:

- Germination and biomass of higher plants



OUTLOOK

No negative effect on:

- Germination and biomass of higher plants

No negative effect on:

- Survival and weight of earthworms?
- Micro-organisms (nitrification process)?

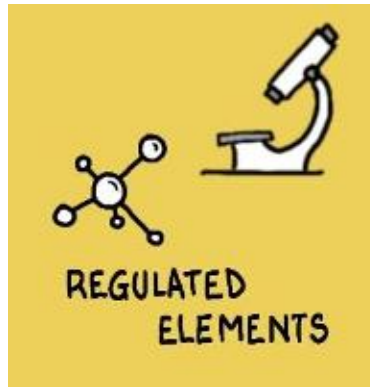
EN 13432 (20..)

Discussion items – Regulated elements

TODAY

Limit values for:

- Metals
- Total fluorine
- Ash



OUTLOOK

Limit values for:

- Metals
- Total fluorine
- Ash

No intentional use of:

- PFAS
- Substances hazardous to the environment
- Substances of very high concern
- ...?

Impact of PPWR on standardisation

Compostable in home composting units

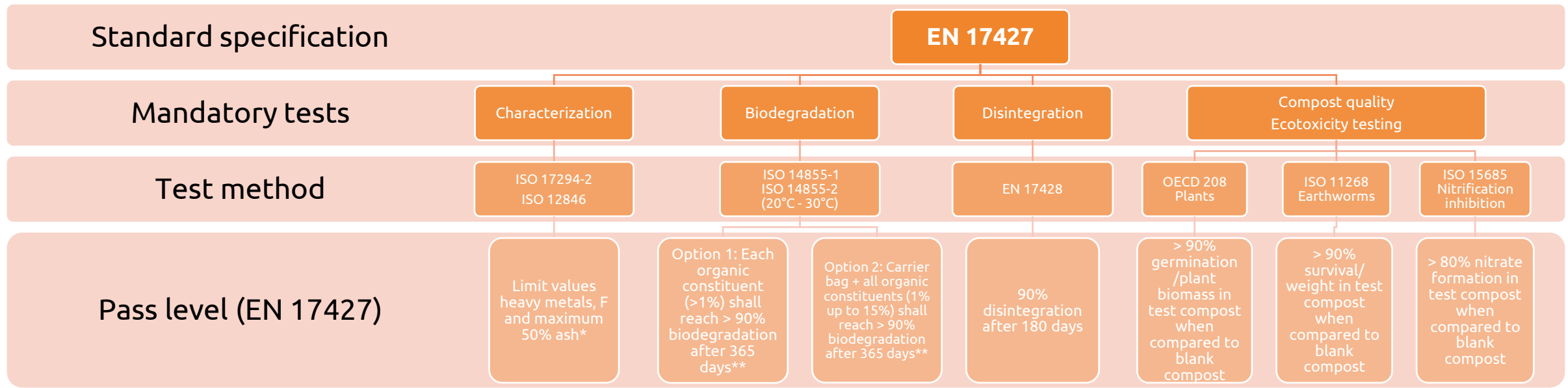
- “By 12 February 2026, the Commission shall request the European standardisation organisations to prepare harmonised standards laying down the detailed technical specifications of the requirements on home compostability”.
- Target packaging applications for home compostability (= Article 9.1):
 - Permeable tea, coffee or other beverage bag, or soft after-use system single-serve unit that contains tea, coffee or another beverage, and which is intended to be used and disposed of together with the product;
 - Sticky labels affixed to fruit and vegetables.



Impact of PPWR on standardisation

Compostable in home composting units

- Possible starting point for standard?
 - EN 17427: Packaging - Requirements and test scheme for carrier bags suitable for treatment in well-managed home composting installations



Conclusions

- **Compostability for all packaging applications?**
 - No! Only for specific packaging applications which increase biowaste collection and reduce contamination in biowaste
- **Which packaging applications?**
 - Harmonisation in Europe for permeable coffee and teabags and fruit/vegetable stickers
 - Home compostability of permeable coffee and teabags and fruit/vegetable stickers → Decision per Member State
 - (Very) lightweight and non-permeable tea, coffee or other beverage system single-serve unit → Decision per Member State
 - Extra compostable packaging applications → Decision per Member State
- **Impact on standardisation?**
 - Revision EN 13432 (including anaerobic digestion, etc.)
 - Extra standard for home compostable permeable coffee and teabags and fruit/vegetable stickers



Questions?

Contact us!

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