



PEF: SUSTAINABILITY MEETS PERFORMANCE

Synvina continues to build its world-leading positions in furandicarboxylic acid (FDCA) and polyethylenefuranoate (PEF). FDCA is the building block for PEF, a novel Polyester suitable for a multitude of applications including food and beverage packaging.

RAW MATERIALS

Currently based on 1st generation feedstock, specifically **sugars made from corn and wheat**, FDCA can also be produced from 2nd generation feedstock. FDCA is polymerized with bio-based mono ethylene glycol (MEG) to produce PEF.

100% bio-based solutions

FDCA/PEF

Synvina combines the strengths of its mother companies: **Avantium's technology leadership** and BASF's **market and engineering leadership** to create the global leader in FDCA and PEF.

50K tons reference plant for FDCA intended

APPLICATIONS

- Improved gas barrier properties **extend the shelf life** of packaged goods (oxygen 10x higher; carbon dioxide 6-10x higher; water 2x higher);
- 60% higher modulus leads to **higher mechanical strength**, thus thinner packaging and fewer resources;
- 12°C higher glass transition temperature **improves heat resistance**.*

3 major benefits make PEF an excellent material for the packaging industry

RECYCLABILITY

PEF bottles can be **blended in existing PET recycling streams** without any negative impact on haze, color and other properties on currently used PET bottles.

100% recyclable in commercial recycling machines