



ARBOCEL®
for enhanced
thermoplastics

PLANT FIBERS FOR PLASTIC COMPOSITES

Plant-based Materials Contribute to Sustainability in Conventional Plastics and Synergize with Bioplastics.

Advantages of ARBOCEL® in Thermoplastics and Bioplastics



Natural
appearance



Reduce fossil



Biodegradable



Lightweight
filler



Increase
mechanical
properties



Improve
dimension
stability

Conventional Thermoplastics PP | PE | PVC | TPE

In everyday life, fossil based plastics will continue to play an important role in many applications. The incorporation of bio-based fillers consists a first step towards efficient sustainability along the road towards bio-based feedstocks.

Applications

Automotive interior | pencils | learning materials | plant pots | household appliances | cutlery | rigid packaging | bottles

Product Use

Case 1: Pencils



Resin: HDPE
Filler: **ARBOCEL® C-100**
Weight percent: 60 - 70 %
Processing method: Extrusion

Case 2: PlayBricks



Resin: PP
Filler: **ARBOCEL® C-320**
Weight percent: 70 %
Processing method: Injection

Bioplastics PLA | PHA | PBAT | PBS | TPS

Bioplastics are a rapidly growing within the plastics world. In synergy with plant-based fibers they can become a functional and commercial alternative to conventional plastics.

Applications

3D filaments | coffee capsules | straws | cutlery | rigid packaging | food trays

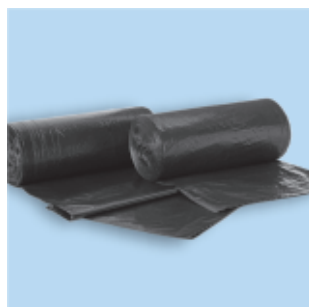
Product Use

Case 1: Coffee Capsules



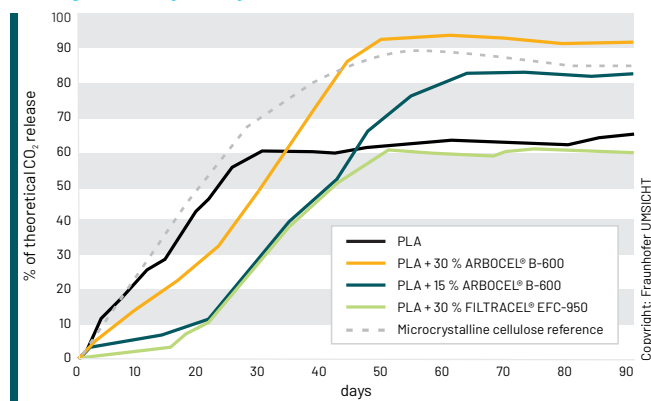
Resin: PBS/PLA
 Filler: **ARBOCEL® B-600**
 Weight percent: 30 %
 Processing method: Injection

Case 2: Agriculture foil



Resin: PBAT/PBS
 Filler: **ARBOCEL® CW-630-PU**
 Weight percent: 5-10 %
 Processing method: Extrusion

Biodegradability Study with PLA Matrix



Biodegradability measurement according to DIN ISO 14855-1 (PLA - Natureworks 2003D, cellulose fibers ARBOCEL® B-600, CTMP FILTRACEL® EFC-950)

Product Selection

Overview	µm
Microcrystalline cellulose	
ARBOCEL® UFC-100	6-12
HEWETEN® 105	15
HEWETEN® 101	65
Native cellulose (hard wood)	
ARBOCEL® BE 600-10-TG	18
ARBOCEL® B-600	60
ARBOCEL® BW-40	200
ARBOCEL® B-400	900
Native cellulose (cotton)	
ARBOCEL® BSCH-750-D	650
Off-white cellulose / technical grades	
ARBOCEL® FD-600-30	45
ARBOCEL® FD-00	150
ARBOCEL® PWC-500	500
CTMP (soft wood)	
FILTRACEL® EFC-250	40-80
FILTRACEL® EFC-1350	120-160
Wood fibers (soft wood)	
ARBOCEL® CW-630-PU	40
ARBOCEL® C-750-FP	70
ARBOCEL® C-100	100
ARBOCEL® C-320	300

Disclaimer

The above mentioned information is based on our practical knowledge and experience and is meant to be helpful when using our products. Due to the different materials and processes involved, we recommend in any case, adequate testing at your company or consultation with us. We cannot be held liable for this information. Please consider country-specific regulations.

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