

# GreenLution

## The Future Capsule System

### The Environmentally Friendly Alternative to the Production of Coffee Capsules

The GreenLution capsule system, with its perfectly matching capsule, top film and filling line components, offers the possibility of producing coffee capsules while taking ecological aspects into account. It is characterized by the use of sustainable materials for capsule and top film, resource-saving dosing and packaging, as well as being fully recyclable. GreenLution promotes a sustainable closed-loop system from production and use, all the way to the recycling of the packaging material. The great interest from the market for mono-material PP GreenLution solutions confirms our vision of sustainable packaging without loss of quality.

### The Fields of Application

#### Wide Range of Applications

The GreenLution capsule system is ideal for filling coffee, milk and chocolate powder as well as tea. However, it can also be expanded and used for packaging systems of other types that are not recyclable today.

### The Properties

#### Convincingly sustainable

- Completely recyclable
- Sustainable material: capsule made of PP with a proportion of certified PP based on biological waste, recyclable mono-material laminate made of PP for top film
- Aluminum free



## The Advantages

Sustainably convincing compared to conventional top film

	GreenLution top film OPP/barrier/ CPP	Conventional top film PET/Barrier/CPP
Fully recyclable	X	-
Good rating for recyclability	X	-
Lower carbon footprint	X	-
Reduced material consumption when using a 2-ply laminate	X	X
Contributes to sustainability initiatives for filling line operations	X	-
Enables implementation of legal requirements concerning sustainable packaging	X	-

## The Added Value

Resource-saving, aluminum-free, easily recyclable

Capsule	Capsule top film	Filling line
Filter parts inside the capsule made of monomaterial	High-barrier mono-material top film for optimal recycling	Highest dosing accuracy for different types of coffee
Capsule made of PP with a proportion of certified PP based on biological waste	Excellent product protection thanks to high aroma barrier	Minimum space requirement with an efficiency increase to 98 % and a production scrap rate of < 0.05
NIR detectable materials for best sortability	High oxygen and water vapor barrier as well as against MOSH/MOAH	Maximum product protection with minimum gas consumption
Optimal aroma barrier, up to 24 months	Up to 24 months shelf life thanks to OPP barrier	Low energy consumption due to optimized sealing technology with consistent sealing quality
Aluminum free	Aluminum and BPA/PVC/PVDC free	Improved film utilization through optimized film handling
Multi-layer capsule without additional repackaging or Secondary packaging	Use of 2-ply or 3-ply laminates possible	Preventive maintenance programs reduce wear parts and increase productivity
Food compliant according to FDA and EU regulations	Perfectly matched to capsule and filling line	Short set-up time and fast availability through vertical start-up service concept
EVOH < 3 %, therefore highly recyclable	The lid film has a favorable recyclability rating at Interseroh	Simple conversion of existing machines thanks to modular design
Capsule geometry and color at choice, perfectly coordinated with top film, bottom film and filling line	Thanks to comprehensive development and know-how of the system partners, only minor adaptation to the filling line necessary	Sustainable, professional disposal of trial and commissioning materials
Certified by the institute cyclos-HTP as recyclable and good assessment of recyclability by Interseroh	Printable in gravure and digital printing	

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