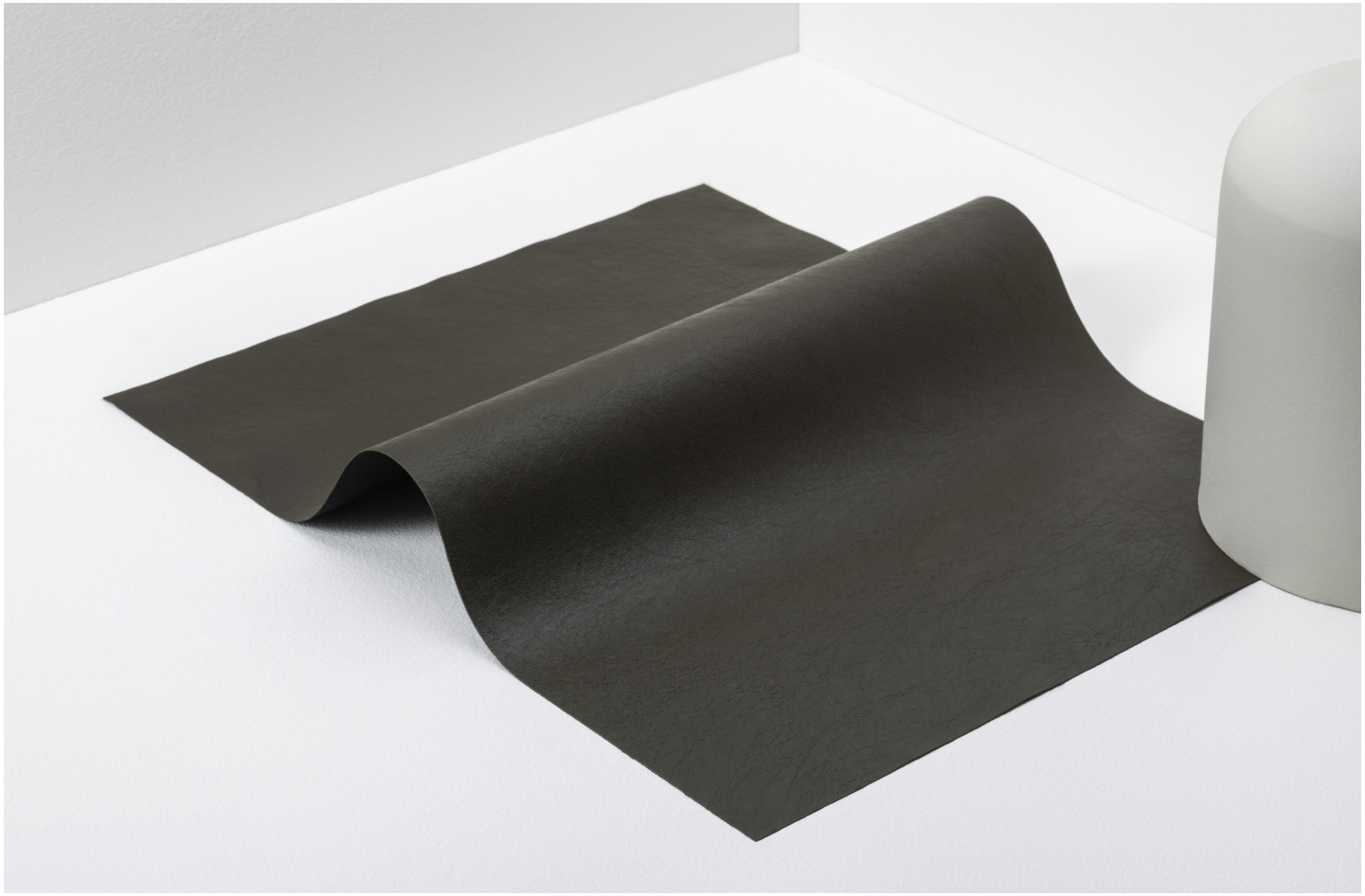
ephea™



JULY 2024

LAUNCH

AURA

Light on
EARTH

Light on
YOU

ephea™ AURA:

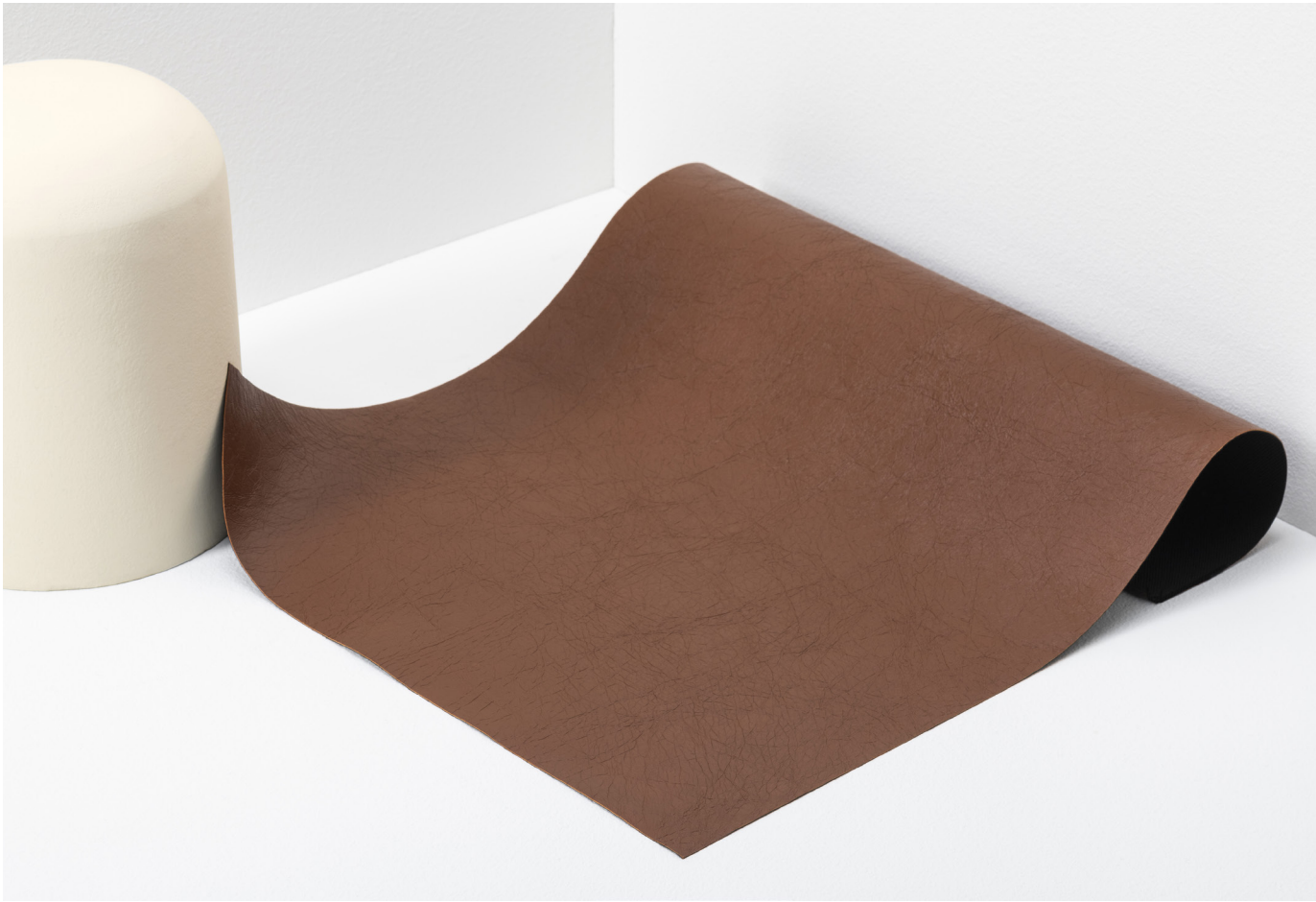
Elevating Fashion with Cutting-Edge Mycelium

ephea™ AURA sets new standards among the innovative class of mycelium materials developed by SQIM, to help advance the fashion industry towards a more virtuous future.

ephea™ AURA is crafted from **mycelium**, the vegetative body of fungi - a renewable living agent thriving on low-value feedstocks.

ephea™ AURA is **not a leather replacement**. It doesn't passively derive from other supply chains; it's **literally grown** thanks to cutting-edge, proprietary fermentation technology and a comprehensive understanding of related bio-technological processes. This allows us to transform low-value feedstocks into high-quality, **innovative alternatives** to traditional materials like animal leather and synthetics, championing a fashion approach with a **lower environmental impact**.

By embracing natural technologies that foster circularity and responsible innovation, ephea™ AURA helps **brands** boost profits while driving **positive transformation** across the entire fashion supply chain.
All this is achieved **without compromising on quality, durability, performance, or aesthetics**.



Good for Planet

ephea™ AURA shows how next-gen materials can increasingly contribute to a future where human activities give back more to the ecosystem than they take away.

Through a thorough **Life Cycle Assessment** (LCA)[1] of ephea™ AURA, we provide evidence of its environmental impact from raw materials to finished products. Our assessment, based on **transparency** and a **data-driven** approach, focuses on our current pilot-scale production. This ensures accuracy while also setting the stage for further improvements along ongoing industrialisation steps.

Acknowledging the urgent need to **minimise environmental impact**, ephea™ supports brands in effectively addressing this challenge and achieving their goals.

Results demonstrate that with our meticulously measured environmental performance, we are already **paving the way for an increasingly ethical fashion landscape**[1]. The graphs show ephea™ AURA's performance in comparison with a traditional material typically used for bags and accessories - i.e., bovine leather[2].

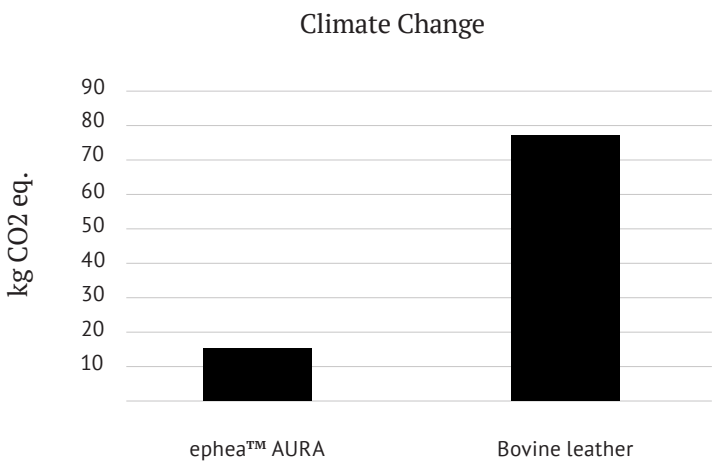


Fig.1 - The graph shows the impact on climate.
The impact is quantified by greenhouse gas (GHG) emissions, measured in kilograms of CO2 equivalent.

1. Values derive from an LCA analysis executed by a third party according to UNI EN ISO 14040, UNI EN ISO 14044, UNI EN ISO 14025. The functional unit is 1sqm of finished material. The system boundary is cradle-to-gate.

2. Comparisons have been conducted in compliance with Product Category Rules (PCR) FINISHED BOVINE LEATHER – The International EPD® System. Data in graphs are taken from database Environmental Footprint 3.1, Beef co-product, hides and skins (PEF compliant), at slaughterhouse/IE Economic.

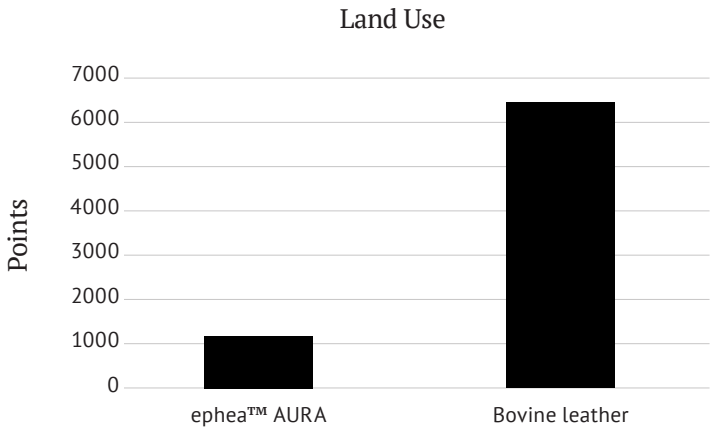


Fig. 2 - The graph defines the impacts on the natural environment, covering land occupation, transformation, soil quality, biodiversity, ecosystem services, and resource depletion. Results are expressed as a score, according to market standards.

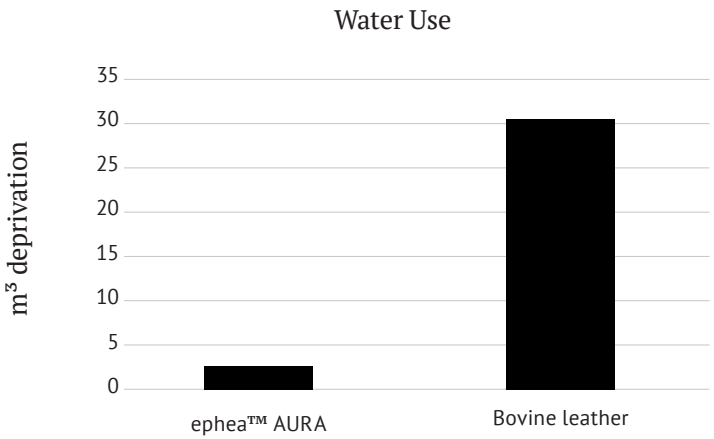


Fig.3 - The graph highlights the impacts on water resources throughout the product life cycle, including water used for producing raw materials and additives.

Good for Products

Lightweight

We care about comfort and freedom of movement.
That's why we've engineered ephea™ AURA to be incredibly lightweight, weighing just 350 g/sqm. That's one-fourth the weight of conventional materials used in crafting bags and accessories.
This remarkable lightness sets the standard for practicality in every final product, allowing customers to enjoy effortless carrying.

High-Performing

At ephea™, we're committed to ensuring that our material is prepared to handle any challenges final products may encounter. That's why we've conducted rigorous testing on ephea™ AURA to thoroughly assess its characteristics and resilience. Durability is for us a key driver, constantly informing our dedication to crafting materials that endure the test of time. We have tested ephea AURA's durability performance, as in line with stringent international standards, and we're excited to witness its potential to age gracefully and demonstrate its longevity. For more detailed information, please refer to the Technical Sheet at the end of this document.

Compliant to Regulations

We make sure that our products meet safety and sustainability standards, adhering to guidelines for chemical management and eco-conscious practices. All chemical tests conducted on ephea™ AURA align with the EU limits set in REACH regulation Annex XVII, and the chemicals used in the transformation process comply with ZDHC regulations.

Good for Makers

High Personalisation

ephea™ AURA offers extensive customisation possibilities, tailoring each product to specific desires. With its versatile colour spectrum and textures, it seamlessly accommodates a variety of manufacturing technologies, transforming any creative vision into unique and iconic pieces.

BALENCIAGA WINTER 22 MAXI HOODED WRAP COAT realised with ephea™. Image courtesy of Balenciaga

Premium Quality and Industry Recognition

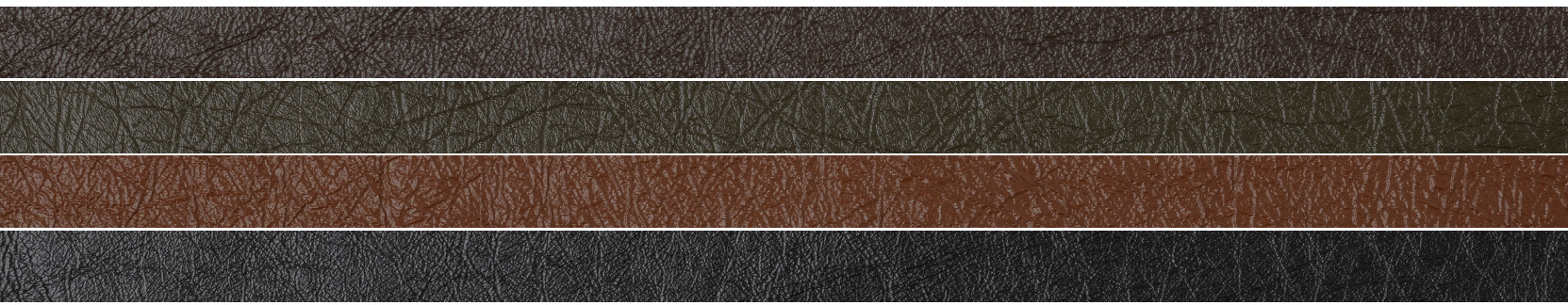
ephea™ materials are appreciated for their premium qualities and versatility, making them ideal for high-end fashion, especially due to their suitability in creating bags, wallets, accessories, garments, and more. Our key partnership with the KERING group is a strong testament to the luxury fashion industry's recognition of our solutions, with high-end fashion brands such as Balenciaga having already integrated ephea™ into their products since 2022. We make sure that our products meet safety and sustainability standards, adhering to guidelines for chemical management and eco-conscious practices. All chemical tests conducted on ephea™ AURA align with the EU limits set in REACH regulation Annex XVII, and the chemicals used in the transformation process comply with ZDHC regulations.

Product Development Support

Conscious of the challenges emerging when adopting a new material, our team is available at every step of the way, offering expertise and support to navigate practical obstacles along the manufacturing process. Through shared best practices and mutual learning, we're committed to partnering with brands to bring products to life seamlessly and efficiently .

Distinctive Appeal

We envisage luxury as either captivating or intriguing, but always standing out with its own personality. Our material embodies this ethos with its unique touch and feel; its distinctive aesthetic qualities spark curiosity, subtly hinting at its unpredictable nature, ensuring that products stand apart with an understated aura of exclusivity.



ephea AURA - Technical Data Sheet

Physical Characteristics

Property	Specific parameter	Result
Thickness	Thickness without backing	0.5-0.8 mm
Surface	Area of one panel	0.2 m^2 + 25%
Weight	Weight of one panel without backing	65g ± 10%

Technical Specifications

Property	Standard	Specific parameter	Result
Elongation at break	UNI EN ISO 3376:2020	Elongation percentage	22%-26%
Abrasion resistance	UNI EN 13520:2006	Dry abrasion	50.000 cycles
Flex resistance	UNI EN ISO 5402-1:2017	Flex resistance dry	>100.000 cycles
Color fastness to rubbing	UNI EN ISO 11640:2018	Dry degradation	5
		Wet degradation	5
		Dry transfer	5
		Wet transfer	5
Color fastness to water drop	UNI EN ISO 15700:2000	Color variations after 16 hours	5
Color fastness to artifcial light	UNI EN ISO 105-B02:2014	Xenon lamp - 72h (blue scale)	>3
Test for adhesion of finish	UNI EN ISO 11644:2009	-	5,2 N/10mm

Experience ephea™ AURA.

Elevate your brand with natural materials that ensure a brighter, more responsible future.

Contact us to discover more!

contact@sqim.bio

www.ephea.bio
@ephea_mycelium

ephea™
by SQIM