

PaperShell

PaperShell is made by pressing kraft paper with a bio-based resin into fossil-free, load-bearing components, designed to replace carbon-intensive materials like aluminum, plastics, and fiberglass. Switching to PaperShell can cut CO₂e emissions by up to 98% and becomes carbon-negative when circulated.

Durable and low-maintenance, our material is emission-free, odorless, and sourced from 100% biological origins. It resists scratches, impacts, and climate cycling, while withstanding high temperatures, UV exposure, and moisture without compromising integrity. Outdoors, it ages gracefully to a silver tone, offering long-term performance with minimal upkeep.

Highlights

Biogenic content

100%

Density

1,43 g/cm³

T_g

145°C

Thickness

0.5-7 mm

Environmental	Area	Result	Unit	Standard
	Heat resistance ¹	0	mm/min	BMW GS 97038
	Total emission of volatile organic compounds	61	µg/g	Volvo STD 429-0003
	Climate cycling ¹	0,22	%	Volvo TR 23644196-02
	Moisture aging ²	6,3	%	Volvo TR 23644196-02
	Biogenic content, no fossil carbon	100	%	Modified ASTM D6866-21
	Biodegration	51	%	ISO 14855-1
	Heat aging ⁴	Slight change in colour		Polestar DVM-INT-00709
	Sound isolation ⁵	23	dB	SS-EN ISO 10140-1:2021
Area	Result	Requirement	Type of test	Standard
Light exposure	6	≥4	Blue scale, Xenon D65, 1 cycle	DIN EN ISO 105-B06
Light exposure	3/4	≥4	Grey scale, Xenon D65, 2 cycles	DIN EN ISO 105-B06
Light exposure	3	≥4	Grey scale, Xenon D65, 3 cycles	DIN EN ISO 105-B06
Geometrics	Area	Type	Result	Unit
	Thickness, component	min	0,5	mm
	Thickness, component	max	7,0	mm

¹ Horizontal burning rate. ² 10 cycles a 6 h at 85°C, 12 h 95% RH at RT, 5 h -30°C. ³ 38°C, 95% RH, 1008 h. ⁴ 500 h, 95°C.
⁵ The weighted sound reduction index Rw relative to the one-sided area of the test object, 0.09 m².