

**Acoustic**



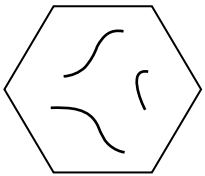
Material Data Sheet

# Material Data Sheet

## Acoustic mycelium-based products

Mogu Acoustic collection marks an unprecedented revolution for interior design comfort. Mogu Acoustic are the first commercially available products of their kind, entirely made of fungal mycelium and of upcycled textile residues. Thanks to the unique technology, Mogu Acoustic panels represent today the most sustainable solution dedicated to acoustic comfort.

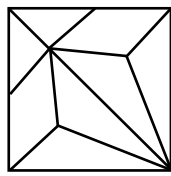
## Models



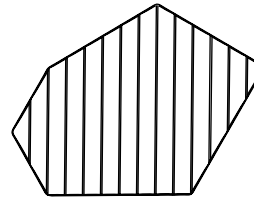
WAVE HEX



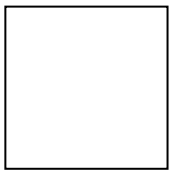
WAVE RHOMBOID



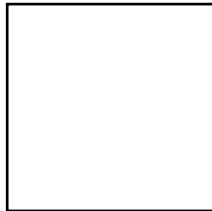
KITE



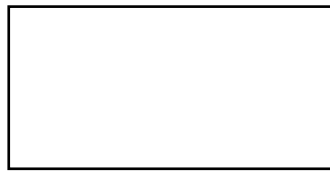
FIELDS



PLAIN - 50



PLAIN - 60



PLAIN - 100

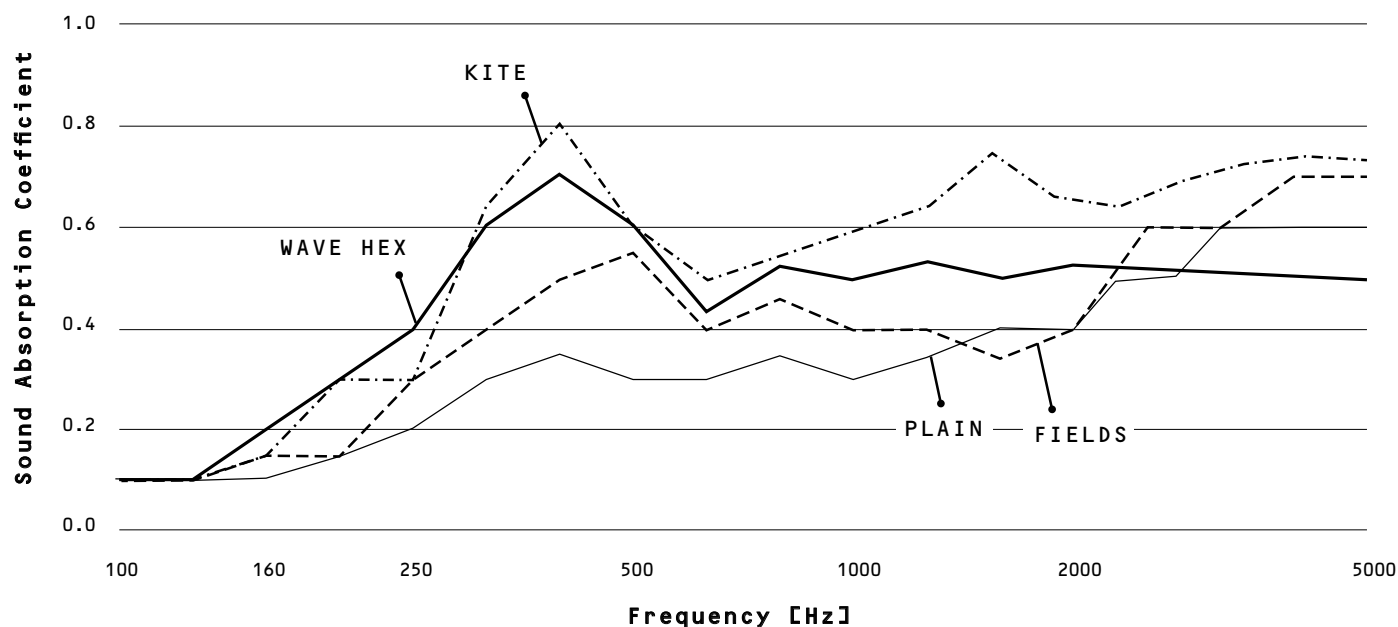
## Dimensions & weight

	w [mm]	h [mm]	t [mm]	side [mm]	sqm	n°/sqm	weight [Kg]
WAVE HEX	560	485	25-75	280	0.2	5	1.1
WAVE RHOMBOID	280	485	25-60	280	0.1	10	0.6
KITE	500	500	40-75	500	0.25	4	1.3
FIELDS	760	535	45	210	0.25	4	1.2
PLAIN - 50	500	500	40	500	0.25	4	1.0
PLAIN - 60	600	600	40	600	0.36	2.78	1.2
PLAIN - 100	500	1000	40	500	0.5	2	1.5

## Reaction to fire & standards

	Fire-proof	Natural touch
Classification - UNI EN 13501-1	B-s1-d0	D-s2-d0
Flame Retardant typology	water-based, eco-friendly, non-halogenated, heavy-metals free	none
Texture appearance	white, compact and tough	white with small tone variations, velvety and soft
Moisture sensitivity	RH > 50% (small tone variations may appear on surface)	RH > 80%

## Acoustic performance



## Acoustic characteristics (NRC)

	t [mm]	$\alpha$ [250 Hz]	$\alpha$ [500 Hz]	$\alpha$ [1000 Hz]	$\alpha$ [2000 Hz]	NRC
WAVE HEX	25-75	0.4	0.6	0.5	0.5	0.53
KITE	40-75	0.3	0.6	0.6	0.6	0.53
FIELDS	45	0.3	0.5	0.4	0.4	0.4
PLAIN - 50	40	0.4	0.4	0.4	0.4	0.4

Measurements according to ISO 354 - Reverberation Room Measurement Method, with no distance between panels and floor. A distance of 25 mm can further improve the acoustic performance.

## Physical appearance & performance

Product type	Wall / ceiling panels for interior design	Fire Reaction UNI EN 13501-1	B-s1-d0
Color	Natural white	UV resistance UNI EN 15187	Excellent [grey: 5/5; blue scale: >6]
Odor	Medium smell at first opening, dissolved in 1 week.	Dimensional variation UNI EN 1604	< 0.4% (40°C; RH=70%) -2.0% (70°C; RH=90%)
Density	180 kg/m <sup>3</sup>	Thermal Conductivity UNI EN12664-2	0.050 W/mK (34 mm thickness)
Flexural Strength	0.05 MPa	TVOC emission rate ( $\mu\text{g}/\text{m}^2\text{h}$ )*	10
Compression Strength UNI EN 826	10.72 kPa	VVOC emission rate ( $\mu\text{g}/\text{m}^2\text{h}$ )*	91
Impact Resistance ISO 4211-4	10-200mm: no damage [5/5]; 400 mm: slight sign [4/5]	SVOC emission rate ( $\mu\text{g}/\text{m}^2\text{h}$ )*	<2
Deformation	2.5% before rupture		

\*Simulated results of VOC Emissions based on 15-days chamber testing. Official results according to Indoor Air Comfort test will be released in autumn 2019.

Mogu was founded on the belief that it is possible to employ Nature's intelligence to radically disrupt the design of everyday products, seeking a finer balance between the man-made and the rhythms of the natural ecosystem.

Mogu products are obtained by growing mycelium, the vegetative part of mushrooms, on organic fibres (low-value residues from agro-industrial value chains).

The products are the result of five years of continuous and iterative R&D on mycelium technology, guided by a strong product-driven approach.

