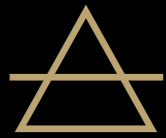


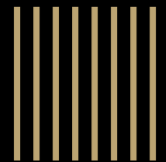
TECHNICALS

***Strong, light, durable.
The mesh from the future.***



Fire Resistance

i-Mesh is certified A-Class for ASTM tests and Class BS1D0 for European standards: the best ratings in terms of fire resistance in the construction market, suited for public installations.



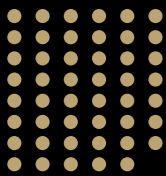
Durability

Aging tests and real-life installations in extreme weather conditions show no changes in the performance or color of the material.



Recyclability

The material is made of just two components: fiber and resin. The resin has a thermoplastic origin, therefore both components can be separated and re-used.



Zero Waste Philosophy

With conventional fabrics, converters buy rolls of material and create a substantial amount of waste transforming the fabric into a panel. With i-Mesh, no industrial waste is generated because it is produced in a custom manner, exactly in the shape and pattern desired.



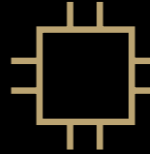
Lightweight

The fibers we use have the best strength-to-weight ratio and are placed only where needed. The outcome is a lightweight material that equates to lower shipping costs, compact sizes and low energy consumption.



Light Properties

When utilized in front of a window, i-Mesh is a great light diffuser, reducing glare discomfort while producing a higher lux level inside the space and still preserving a high level of visual comfort.



Easy Installation

The installation of i-Mesh can be a very simple procedure with savings in terms of manpower and equipment; no skilled workers are required and you can install it yourself.



Natural Ventilation

The permeability of i-Mesh panels allows natural ventilation to flow on both vertical applications such as facades, and on horizontal ones such as covers.



Reusability

Thanks to its natural mechanical resistance, i-Mesh panels generate considerable savings over disposable materials. The panels can be installed and stowed away regularly event after event, or re-cut for new installations.



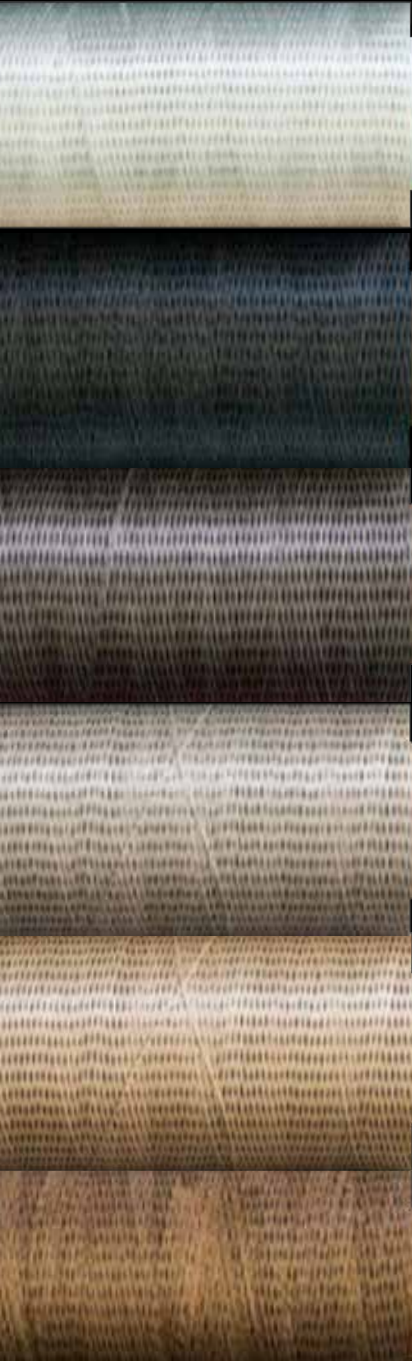
Thermal Comfort

i-Mesh is classified as cool material which reflects solar irradiation. The use of i-Mesh on facades improves thermal comfort indoors during the hottest months. The cooling properties are enhanced by its air permeability.

Six natural solutions

FIBERS

The six basic colors are the natural colors of the fibers. The mineral tones - Carbon, Glass, Basalt and Volcano have a color stability exceeding 20 years under the sun. During this time it remains as clean and reflective as when new.



Fiberglass is excellent for outdoor solutions because steady over time, due to its capacity of resistance to sunlight exposure and excellent in the matter of reflectance to light and heat.

FIBERGLASS
MINERAL

TENSILE STRENGTH TO WEIGHT	HEAT REFLECTANCE	COLOR CHANGE BY UV	COLOR	LIGHT TRANSMITTANCE	STRENGTH AFFECTED BY UV	COST
moderate	low	no	white	medium	no	medium
very high	no	no	black	no	no	high
moderate	low	no	brown	no	no	medium
moderate	medium	no	champagne	moderate	no	medium
high	medium	yes	gold	low	yes	medium
very high	low	no	copper	no	yes	very high

Carbon fibers have several advantages including high stiffness, high tensile strength, low weight, high chemical resistance, high temperature tolerance and low thermal expansion.

CARBON
MINERAL

Basalt fibers has similar characteristics to fiberglass but has better physico-mechanical properties.

BASALT
MINERAL

Volcano derives from the volcanic rock which is enriched in order to enhance its mechanical, thermic and chemical performances.

VOLCANO
MINERAL

Technora® is a very strong fiber - eight times as strong as steel - and has great heat and chemical resistance.

TECHNORA
MAN MADE

Zylon has very high breaking load and value of elastic modulus; excellent creep and heat resistance.

ZYLON
MAN MADE

Fibers mechanical characteristics

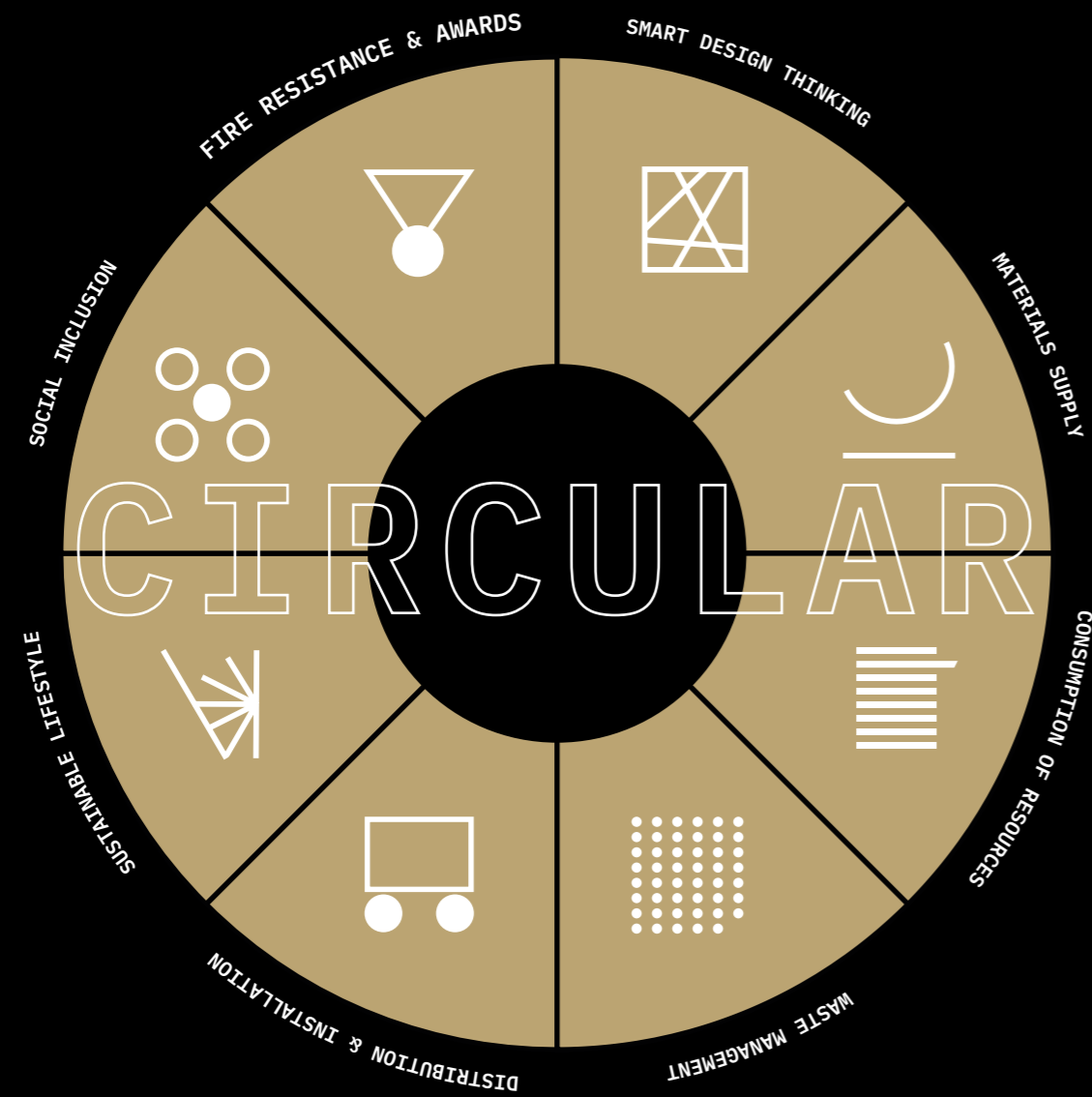
MATERIAL	TENSILE STRENGTH Npa	DENSITY g/cm3	SPECIFIC STRENGTHKN m/kg
Aluminium Alloy (6061-T6)	310	2.70	115
Stainless Steel (304)	505	8.00	63.1
Zylon	5800	1.54	3766
Carbon Fiber	4300	1.75	2457
Technora	3620	1.44	2514
Basalt Fiber	4840	2.70	1790
Volcano	3400	2.60	1307

NORMATED TESTS	PROPERTY	STANDARD
COMPOSITION	Polymer/fiber ratio by TGA	ASTM E1131
	Thermal conductivity	ISO 22007-4
PHYSICAL	Relative density	ASTM D792
	Normal density Mass per Unit Area of Fabric	ASTM D3776/D3776M
	Specific heat	ISO 11357-4
	Light transmittance	ASTM D1003
OPTICAL	Reflectance	ASTM E903
	Gloss	ASTM D523
	UV-B	ISO 4892
AGEING	UV-B	ISO 4892
ACOUSTICS	Reverberation	ISO 11654:1998

i-Mesh technology

MATERIAL	TENSILE STRENGTH Npa
FIBERS	Glass, Basalt, Carbon, Technora, Zylon, Volcano
COMPOSITION	60% fibers - 40% thermoplastics
	PVC FREE
WEIGHT	from 116 gr/sqm to 1000 gr/sqm
SIZE	unlimited
MECHANICAL PROPERTIES	on specification

CERTIFICATIONS	STANDARD	RESULTS
FIRE RETARDANCY	UNI 9174:1987+A1:1996 UNI 9176:1998	ITA Class 1
	EN ISO 11925-2:2010	EU B-s1-d0
	ASTM E84_16-068A	Class A
	CAN ULC S102 16-068B	FSR: 10 - SDC: 35
REFLECTANCY	ASTM E903	70 %
CE	EN 416	
LEED EVALUATION		Up to 34 points



i-Mesh is a simple product. It's made of two components: fibers and a thermoplastic polymer. Strategically exploiting the high durability and the specific physical properties of each fiber, we offer six different fiber types, four of which are mineral.

The 2/10 mm of thermoplastic polymer we protect and bond the fibers with, doesn't change its properties during the industrial process.

This means that it can be separated from the fibers during the recycling operations.

Ellen MacArthur
© Mark Lloyd / BT Team Ellen



Circular Economy

"A circular economy is a systemic approach to economic development designed to benefit businesses, society and the environment.

In contrast to the 'take-make-waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resources.

Design sits prominently at the heart of the circular economy. Design is key to the first principle of circular economy, "design out waste and pollution."

The reality is that most things today are still designed for the linear model. It requires us to redesign everything: products, business models, cities, and the linear systems that have lasted for the past centuries."

Ellen MacArthur Foundation



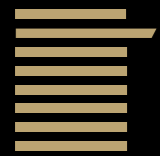
Smart Design thinking

Design thinking is the key of the i-Mesh circular philosophy. In the traditional textile world, making a prototype weave requires tangible investments. With i-Mesh, it is possible to prototype even less than 1 square meter, so we can constantly be testing, refining and easily prototyping. It's very easy for us to generate hundreds, thousands of options using such rules and each option can be evaluated using specific criteria to determine the best performance.



Materials Supply

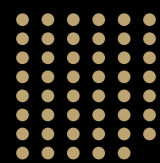
We cannot hide that the process to make such high tech, durable materials are energy hungry, and that the two components we utilize are not produced near us. However, our materials are very light: the weight per square meter is definitely contained. Further, i-Mesh always needs installation hardware that is generally made out of wood or metal. Our supply philosophy aims to facilitate the architects to produce it locally. This approach sustains a local economy and considerably reduce CO2 emissions.



Consumption of Resources

The traditional supply chain of the textile business starts with the (over)production of rolls of fabrics. Then, such rolls are transformed by the jobbers, who generates a remarkable amount of scraps.

We instead, only produce bespoke panels, providing tailored shaped panels ready to be installed. By such a practice, we significantly shorten the traditional supply chain. A short chain means that we save resources in terms of energy, manpower, equipment, money and environment.



Zero Waste Production System

i-Mesh panels are produced by a light, innovative and low energy consumption CAM equipment, which are able to form tailored panels while creating zero scraps. i-Mesh natural mechanical resistance permits to reuse the product countless times in different ways.

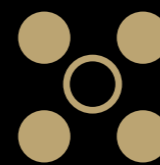
Once the product lifetime is truly over, we supply i-Mesh to the re-cycle centers which can easily separate fibers from polymer because no catalysts or plasticizers are used.



Fire Resistance & Awards

i-Mesh is constantly evolving. Since 2010, we test our products in several research centers, from Europe to Usa, from Japan to Canada.

i-Mesh is rated Class A for the ASTM (American Standards), B1 s1 d0 for European Standards. It's a VoC free product, A+ Class rated. i-Mesh won, among others, the German Design Awards in 2018, the International Design Awards (IDA) in 2017, the Surface Design Awards in 2016.



Social Inclusion

i-Mesh is a little company, driven with hope and passion by 46 people all together. Inside our office departments, we have a prevalence of women on men, while our workers team is multicultural and local at the same time.

We work with people who come from Nigeria, Kurdistan, Macedonia, Albania and, of course, our neighborhood. We perpetrate the model of a glocal and sustainable philosophy oriented to a globalized world.



Sustainable Lifestyle

With i-Mesh we create comfort by controlling the vision, the light, the heat and the reverberation noise. At our company we are with patience and determination modifying all processes in order to improve the sustainability.

Our sustainable approach is shared by all means we can manage, from our website to the direct messages to our users.

Since 2014, our remote work policy allows to reduce the carbon footprints of our commuting employees.



Distribution & Installation

Our B2B business model doesn't generate parasitic costs because after dealing with the architects we sell worldwide directly to the contracting company or to the final user. The lightweight of i-Mesh makes its transport economical, compact and generates low energy consumption. The installation can be a very simple procedure with savings in terms of manpower and equipment. Since 2014, our remote work policy allows to reduce the carbon footprints of our commuting employees.