

# ECOR

## INFORMATION PACKAGE 2020

ECOR EUROPE BY NOBLE ENVIRONMENTAL TECHNOLOGIES



# Healthy Materials For Interior, Furniture & Exhibition Solutions

*Our mission is to be one of the leaders in the circular economy through the deployment of innovate solutions in partnership with global manufacturers, smart cities and government agencies.*

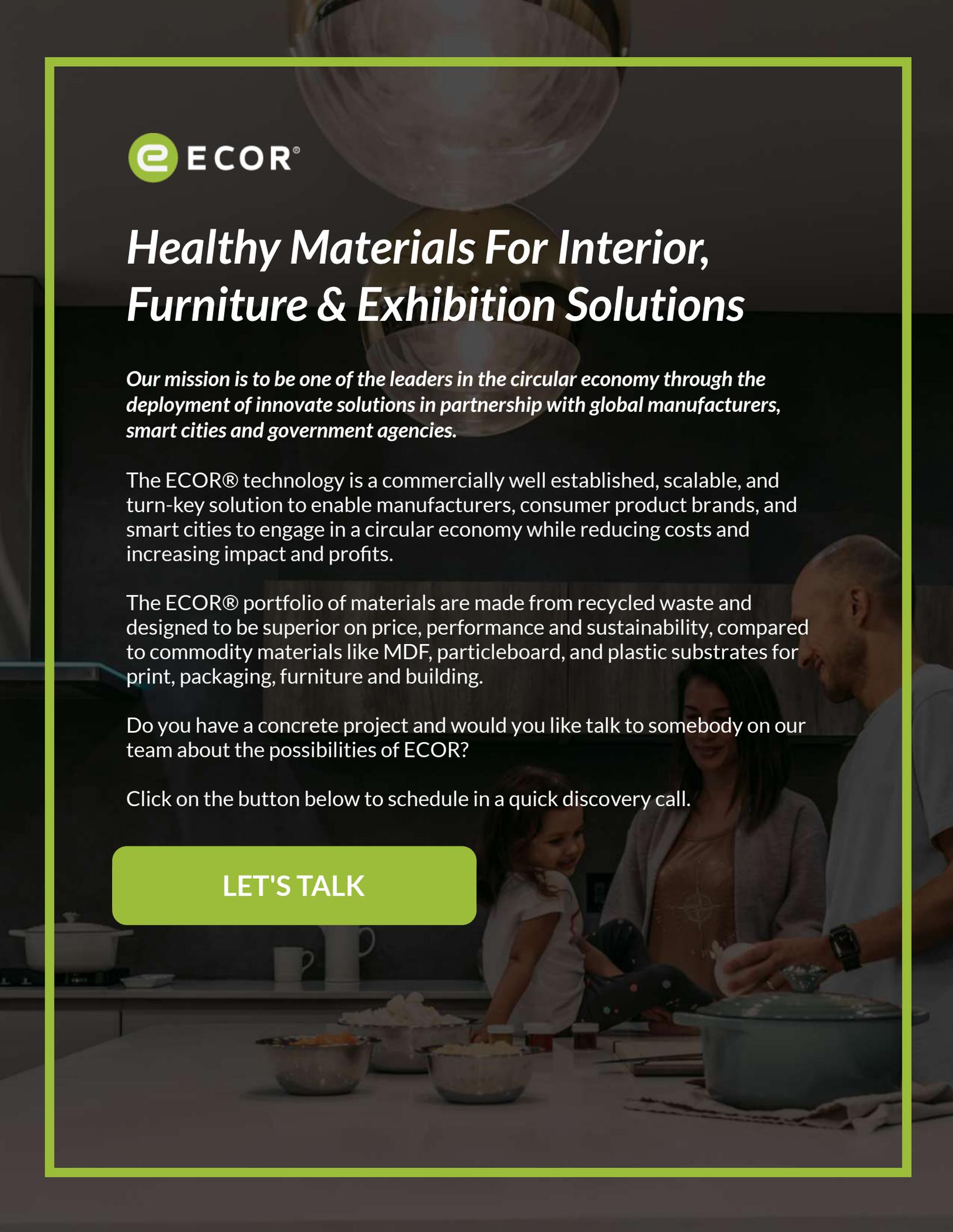
The ECOR® technology is a commercially well established, scalable, and turn-key solution to enable manufacturers, consumer product brands, and smart cities to engage in a circular economy while reducing costs and increasing impact and profits.

The ECOR® portfolio of materials are made from recycled waste and designed to be superior on price, performance and sustainability, compared to commodity materials like MDF, particleboard, and plastic substrates for print, packaging, furniture and building.

Do you have a concrete project and would you like talk to somebody on our team about the possibilities of ECOR?

Click on the button below to schedule in a quick discovery call.

[LET'S TALK](#)



# ECOR® Info Package 2020

Thanks again for your interest in ECOR.

In this information package we give answers to the most frequently asked questions.

This way you can get a deeper look into the ECOR technology and how it helps you achieve your circular economy ambitions.

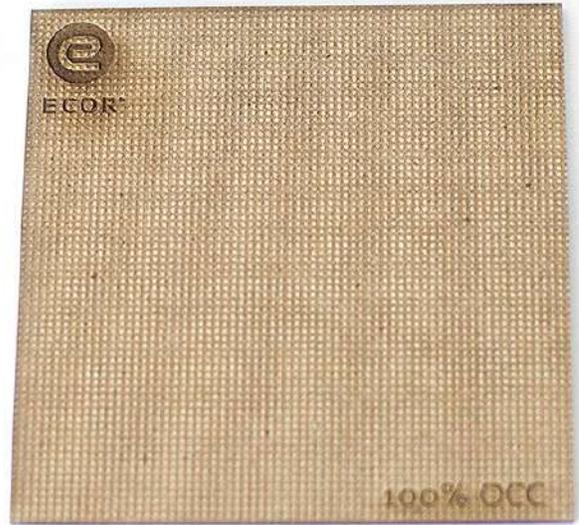
## What is ECOR?

ECOR is a composite material (an alloy) formed from cellulose fibers, pressure, water and heat.

The raw panels can be made from residuals such as old paper, cardboard, coffee ground, hemp, cotton, paddy straw or any type of plant material.

Inspired by nature, ECOR is versatile and offers you an elegant and innovative way to harness the power of cellulose.

This natural binder combined with our technology enables you to design and deliver unique furniture, interior or exhibition solutions.



## Why choose for ECOR?

ECOR empowers you to:

- Valorize cellulose based residual streams
- Contribute to a better and healthier world without waste
- Support circular business models or initiatives
- Design and deliver innovative and disruptive solutions
- Gain competitive advantage



*"Inspired by nature, ECOR is versatile and offers you an elegant and innovative way to harness the power of cellulose"*

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## What can you make or build with ECOR?

The possibilities are endless.

Our partners have produced some amazing solutions for themselves or their clients.

ECOR is extreme lightweight, high performing and super versatile regarding design options.

These characteristics make ECOR ideal for an almost limitless number of applications.

Currently, ECOR is being used in the following applications:

- Signage and wayfinding
- Trade show and retail displays
- Cabinetry
- Exposition booths

- POP displays
- Stage & set construction
- Hanging and wall-mounted installations
- Room dividers and partitions
- Containers and packaging
- Interior designs
- Furniture
- Luxury packaging

## What products, solutions or services do you offer?

We offer three types of solutions:

- Raw ECOR panels
- Standard decorative surfaces
- Custom solutions (which can be made from your own residual fibers)



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## With which materials can we compare ECOR?

The ECOR raw panels can be best compared with traditional wood, MDF, particleboard and fiberboard panels.

It can also substitute other materials in certain applications such as aluminum, plastics and Fiber-reinforced plastics (FRP).

## Are ECOR panels water resistant?

Untreated ECOR panels will absorb water. The panels can be treated with regular water repellents.

To assure flexibility, product integrity and safeguard the ability to recycle in the future, we offer biobased and non-toxic solutions such as [BIOTECTA](#) or [DYSTAR](#).

## Are ECOR panels fire retardant?

Untreated ECOR panels are not fire retardant and are conform EU regulations classified as [D](#), [S1](#), [d0](#).

To assure product integrity and safeguard the ability to recycle in the future, we offer biobased and non-toxic fire retardant solutions such as [Biotecta \(B1, S2, d0\)](#) or [Bioretard \(B1\)](#).



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**What's the strength-to-weight ratio for ECOR panels?**

In example, the 2.5 mm thick ECOR structural panels (ESP's) average 3X the strength-to-weight ratio of traditional commodity building materials like particleboard, plywood and MDF.

The exact strength of the panels will vary and it depends on the functional specifications, composition, engineering and the natural strength of the used fibers.

**How can ECOR enable the transition towards a circular economy?**

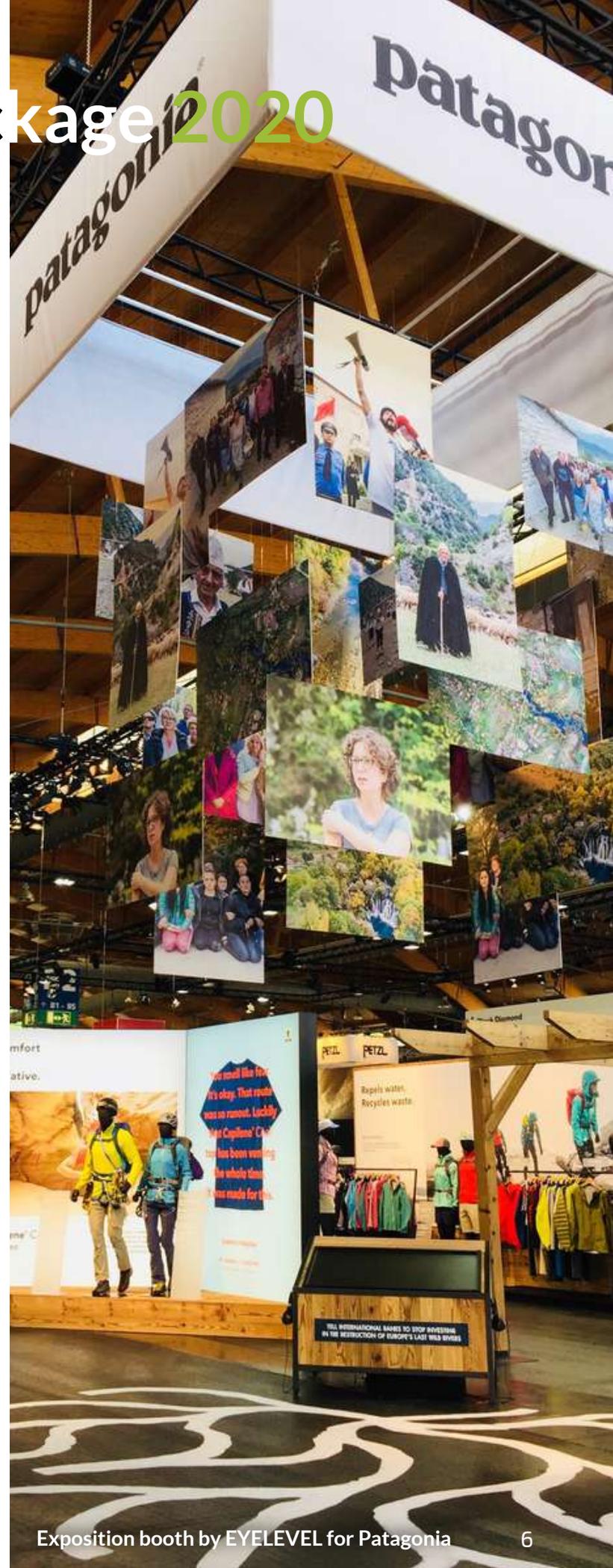
The ECOR technology empowers you to upcycle residual fiber streams into high value biobased recyclable building materials, products or components.

By applying the ECOR technology these fiber streams are diverted from landfills or ordinary waste burning and thus kept at their highest possible level of value.

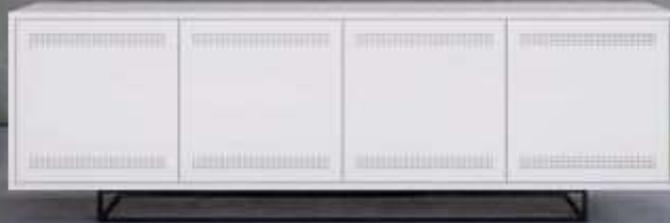
Designers, craftsmen and organizations can now cost-effectively substitute unhealthy and unsustainable materials.

**How does ECOR facilitate and safeguard closed material loops?**

To safeguard circularity in the future (after the use phase) the ECOR Living Factories have agreements in place with stakeholders to guarantee recycling and to maximize the return on resources for them.



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Paper dresser using ECOR by Occony

To safeguard the ability to recycle ECOR panels or solutions may not be contaminated with toxic chemicals (such as paint).

This can be enforced by our partners (and their customers) in the maintenance policies and procedures.

We can also help you organize the reverse logistics with your current contractors.

Last but not least, ECOR solutions are biodegradable which means that they can be shredded, composted and then used as soil enhancer.

## **Is ECOR Cradle-to-Cradle certified?**

ECOR panels and solutions are cradle-to-cradle compliant.

ECOR is 100% bio-based, 100% made from recycled materials, 100% recyclable and 100% toxic-free.

Even though it's almost impossible and way too expensive to certify our whole product range, we do have a [Cradle-to-Cradle Silver certification for OCC FlatCor, OCC WavCor and HoneyCOR.](#)

## **Where was the ECOR technology developed?**

The ECOR technology was originally developed in the USA in partnership with the US Ministry of Forrester Affairs.

## **What is the environmental impact of the ECOR production facilities?**

Our production facilities use minimal energy and 95% of the needed water is constantly recycled.

Due to the clean production process no heavy special environmental and discharge permits are needed.

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## How much does ECOR cost?

It's difficult to give an estimate of total costs per project.

Every project has unique specifications and therefore we suggest that you get in touch with us when you have a concrete project.

But to give you a feeling, FlatCOR™ is competitively priced at €3,50 per square meter.

## Which raw ECOR panels can you deliver?

ECOR panels come in two basic forms:

- FlatCOR™ (flat panels) and
- WavCOR™ (corrugated panels)

From these two basics we can engineer all kinds of configurations and designs based on functional or technical specifications by the end user.

We can also make three-dimensional environmental structural panels (ESP's).

ESP's are stressed-skin panels comprised of an interior core material that has been sandwiched between two exterior flat faces and then laminated together to form an extra strong and lightweight panel.

These ESP's can vary in thickness depending on the functional specifications.

Our most popular and deliverable ESP is called LightCOR™

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The following ECOR panels can be delivered in Europe:



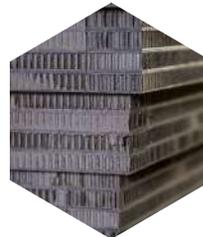
## ECOR FlatCOR

- 100% recycled cardboard and paper
- Size: 3050 x 1220 x 2.5 mm
- Minimum order: 1 pallet, 120 sheets
- Price: €3,50 per square meter
- Smaller order is possible, €35 handling fee applies



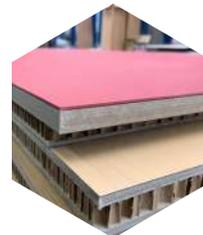
## ECOR WavCOR

- 100% recycled cardboard and office paper
- Size: 2438 x 609 x 3.8 mm
- Depth of ribs: 3.8 cm
- Minimum order: 1 pallet, 120 sheets
- Smaller order is possible, €35 handling fee applies



## ECOR LightCOR

- Environmental structural panel (ESP)
- 100% recycled cardboard and office paper
- Size: 3000 x 1170 mm
- Thickness range: 1.2 - 80 mm
- Minimum order: 1 pallet, 120 sheets
- Smaller order is possible, €35 handling fee applies



## NIAGA-ECOR Panels

- COMING SOON
- Ask for more information



***"ECOR doesn't exist actually!  
ECOR is the combined results of  
the efforts done by our team in co-  
creation with our partners"***

Do you have a concrete project and would you like talk to somebody on our team about the possibilities of ECOR?

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**LET'S TALK**

Background: signage and interior decor using ECOR panels by Threadless Collaborative for Whole Foods