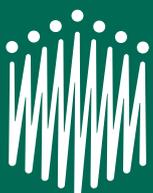




FLAX-LINEN & HEMP
TEX AND TECH

Flax-Linen & Hemp fibre composites

Press kit



**Alliance for European
Flax-Linen & Hemp**

JEC WORLD Event - March 5-7, 2024
Hall 5 Booth C59 - Natural Fibres Village

Meet the key industry players and members of the Alliance's Technical Section on the JEC Natural Fibre Village:

ALLIANCE FOR EUROPEAN FLAX-LINEN & HEMP – FR
HALL 5, C59

www.allianceflaxlinenhemp.eu
Bringing together all players in the European Flax-Linen & Hemp value chain and supporting sourcing

BCOMP – CH
HALL 5, A63

www.bcomp.ch
High-performance natural fibre reinforcements for sustainable lightweighting

CULTURE IN – FR
HALL 5, B74

www.varian.culturein.eu
Creators of Varian®, a material half way between a composite material and a textile

DEMGY GROUP – FR
HALL 5, B64

www.demgy.com
Injection, thermoforming, and additive manufacturing solutions

DEPESTELE – FR
HALL 5, C53

www.groupepestele.com
100% Flax and prepreg untwisted rovings

ECOTECHNILIN – FR
HALL 5, B73

www.eco-technilin.com
Natural fibre solutions for industrial markets

FLIPTS & DOBBELS – FLAXCO – BE
HALL 5, A77

www.flaxco.be
Thermoplastic prepregs with woven Flax fibre and Flax fibre composite panels

LIBECO – BE
HALL 5, C73

www.libeco.com
100% Flax, 100% pre-washed, 2D woven & reinforcements for composites

SAFILIN – FR
HALL 5, C63

www.safilin.fr
Low-twist Flax roving and yarns as wells as a range of woven Flax technical textiles

TERRE DE LIN – FR
HALL 5, C67

www.terredelin.com
Specially selected and prepared Flax fibres and rovings for composites

TEXINOV TECH – FR
HALL 5, A73

www.texinov.com
Technical warp knitted textiles

In addition, Alliance member activities highlighted on the Innovation Planets include:

MOBILITY PLANETS:

GREENBOATS AND DEPESTELE

The GREENLANDER Sherpa with Flax fibre parts is exhibited on the Mobility Planet.

Awards: Nomination for JEC Award in Category: Circularity and Recycling.

The Sherpa is an expedition vehicle that can explore the whole world, it uses Natural Fibre Composite (NFC) panels and profiles that can be recycled at end of life.

POLESTAR AND BCOMP

Flax seatback for the Polestar 3.

The Polestar seatback uses Bcomp's materials for this high-volume interior part that uses 50% less plastic and is 40% lighter than a traditional part.

Alliance for European Flax-Linen & Hemp to host extended Natural Fibre Composites Village at JEC World 2024

The Alliance for European Flax-Linen & Hemp will continue to expand its partnership with JEC Group, hosting a Natural Fibre Village at JEC World 2024 that will showcase the activities of the Alliance and ten of its members in an enlarged 250 square meters area dedicated to natural fibres composites.

JEC World 2024 will see longstanding Alliance member **Libeco** join for the first time, providing 2D woven Flax reinforcements for the composite sector, whilst **CultureIn** and **Texinov Tech**, both new to JEC in 2023, have also signed up again for 2024. In addition, long term Alliance members **Bcomp**, **Demgy**, **Depestele**, **EcoTechnilin**, **Flipts & Dobbels**, **Safilin** and **Terre de Lin** will exhibit a wide range of Flax raw materials and composite products aimed at the automotive, aerospace, marine, sporting goods, design and lifestyle markets. On the JEC Mobility planets, Flax will feature strongly, with **Greenboats** and **Depestele** displaying the natural fibres composite Greenlander Sherpa van structure that has been nominated as a finalist in the 2024 JEC Innovation Awards and Polestar and **Bcomp** displaying a Flax fibre seat back from the Polestar 3.

The Alliance for European Flax-Linen & Hemp will also present its latest scientific work package – adding reliable environmental impact data for European Flax™ fibre to the version 3.10ecoinvent materials database. **This is the first time European Flax™ long and short fibre data (representing 3/4 of global production) has been included in the ecoinvent database allowing Flax users, industrials, and brands to move forwards with truly representative and reliable data.**

Furthermore, as part of the JEC Composite Exchange, Dr Gilles Koolen, Postdoctoral Researcher at KU Leuven and Expert of the European Scientific Council of Alliance for European Flax-Linen & Hemp alongside Alliance directors Marie Demaegdt, Sustainable Director and Julie Pariset, Innovation & CSR Director, will present a session titled *Flax and Hemp: the natural fibres for composite solutions within the industry*. The session will take place on 5 March at 4.00pm on the Agora Stage in Hall 5.

With Flax and Hemp now inspiring the composites industry, meeting the expectations of its manufacturers, and responding to the ethical and sustainable aspirations of its customers, the conference will highlight the most recent innovative developments with Flax-Linen & Hemp. The presenters will also provide an update on the environmental trajectory for European Flax-Linen focusing on fibre and processing data co-construction, availability, and granularity.

“JEC World 2024 sees European Flax™ and Hemp fibres taking a global step forward in advancing the bioeconomy of the engineering and composites sector. These natural fibres, combining their remarkable physical properties and eco-friendly characteristics, allow the most innovative manufacturers in the composites industry to create massive reductions in their overall environmental impact. Backed by scientific validation, our work confirms that Flax and Hemp solutions now meet and exceed manufacturers' expectations for performance, helping them align with the needs of industrial customers and end consumers in a cleaner composite future.”

Valentin Depestele

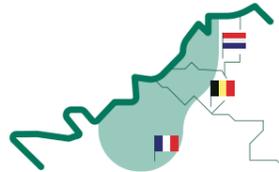
President of the Technical Uses section
Alliance for European Flax-Linen & Hemp

FLAX

3/4
of the world's long* fibre
are produced in France, Belgium
and the Netherlands*

*Long fibres: the main product of scutching, used in the textile industry

Europe,
the #1 global
producer
of Flax fibre



Today, Flax fibres* account for
< 0,5% of global textile fibre production

*Long fibres + short fibres

**3 main Flax-producing
regions in France**
Normandy
Hauts-de-France
Ile-de-France



+ 133% increase in Flax area
from 2010 - 2020

150,000 hectares in Europe of Flax
in 2023 (incl. 87% in France, or 131,000 hectares)

140,000 tonnes
of long fibres in 2023 (incl. 122,000
tonnes in France).
240 000 tonnes of total fibres
(long and short) in 2023.

**1 hectare of
European Flax**

=
900 kg of yarns
or 3,750 m² of fabrics
or 4,000 shirts
or 450 sets of bed linens
or 1,375 chairs made of composite Flax



HEMP

Europe, #2 global
producer
with **55,000 hectares** of
Hemp for all uses in 2020



+ 12 European countries
grow textile Hemp in 2021

**France #1 producer
in Europe with
20,000 hectares**
of Hemp for all uses, incl.
at least 10% for textile
Hemp in 2023



China,
the #1 global
producer
of Hemp



with **65,000 hectares**
of Hemp for all uses

incl. **13,000 hectares**
of textile Hemp in 2023



Source: 2023 Flax-Linen Economic Observatory of the Alliance for European Flax-Linen and Hemp, FAO, Interchanvre

How Flax adds value to composites

European Flax™, a certification of origin that meets all customers' expectations.
The guarantee of traceability for premium quality Flax fibres grown in Western Europe
for all end uses.



EUROPEAN FLAX™

**THE GUARANTEE OF TRACEABILITY
FOR PREMIUM QUALITY FLAX FIBRES GROWN
IN WESTERN EUROPE FOR ALL END USES.**

A plant fibre, produced through integrated
crop management farming, without irrigation*
or GMOs.

*except in exceptional circumstances

THE PROPERTIES OF EUROPEAN FLAX™ FIBRE

Unique functional and environmental properties aligning with current societal expectations.

SUSTAINABILITY

- Proximity and traceability
- No irrigation⁽¹⁾ from sowing to harvesting
including dew retting [vs water retting]
- Certified and GMO free⁽²⁾ seeds
- Renewable resource
- Helps preserve soil quality
A rotation crop that contributes to optimal soil structure
and increases yield for the following crop
- Low input crop
Reasoned use of pesticides and fertilizers⁽³⁾
- Zero-waste plant
100% used
- Scutching: fibre extraction
Mechanical process, without solvents
- Ethical production
performed by a skilled local workforce

PERFORMANCE

- Rigidity
- Lightweightness
- High specific stiffness
- Impact resistant
- High strength
- Thermal insulation
- Vibration damping⁽⁴⁾
- Sound insulation
- Radio transparent
- Multi-material hybridization
- End-of-life optimization
- Low environmental impact

(1) Barring exceptional circumstances

(2) Source: European Flax™ Charter, 2012

(3) Source: Life Cycle Assessment (LCA) of European Flax™ Scutched Fibre, February 2022

(4) Source: Study Vibration Damping, The enlarged European Scientific Council of Alliance for European Flax-Linen & Hemp, March 2023

Flax & Hemp market developments

AUTOMOTIVE & MOBILITY

Flax fibre a series production option

Automotive and Mobility manufacturers continue to evaluate Flax and Hemp materials across their model ranges as they seek to reduce the overall environmental impact of their products. Natural fibres have been used for many years to reduce the carbon footprint in components such as acoustic insulation, headliners and interior mouldings that exploited the fibres' vibration damping and noise, vibration and harshness (NVH) benefits. However, these applications have generally been parts that kept the fibres hidden. Flax is now being used in more visible parts and in significantly higher volumes.

In one of the first visible interior trim packages to be available for a large volume series produced automobile, the new, all-electric, Volvo EX30 marks a major step for Volvo and supplier Bcomp as customers can now select two interior trim packages featuring the natural aesthetics of woven **ampliTex™** Flax fibres. The compact SUV focuses on sustainability and is designed to have the lowest carbon footprint of any model in Volvo Cars' history, with **Bcomp's** Flax fibre composites now offered as an optional trim for the dashboard, and doors of the EX30.



Representing the lower volume end of the transport market, Greenlander, in partnership with investor and Flax material specialist **Depestele**, will also showcase the **Sherpa** - the ultimate 4x4 expedition vehicle built to leave less impact as it travels - at JEC this year. The Sherpa combines plant-based fibres like Flax with bio-based resins and sustainable core materials like cork, wood and recycled PET foam to create durable and lightweight components. As well as the low impact materials, Greenlander also provides a unique business model, offering the composites items as a service and taking them back at the end of their life where they can then be repurposed or recycled.

During the run up to JEC World 2024, several companies have also developed coloured Flax solutions which are likely to become increasingly important as visual fibre Flax solutions become more established in transport applications. **Bcomp** has successfully established a production route for back-injected automotive interior parts that uses its **ampliTex™** PP thermoplastic materials, combining speed and cost benefits of back-injection with the sustainability and performance improvements of coloured natural fibres. **Terre de Lin**, specialists in the production of dedicated Flax fibres and rovings for composites will also launch 100% dyed Flax fibre coloured rovings at JEC. These untwisted 200 to 2400tex rovings are chemical free and suitable for weaving, knitting, braiding, pultrusion, filament winding and automatic fibres placement processes.



Aerospace development continues for natural fibre composites

Since the last JEC show, the commercial aerospace sector has demonstrated major successes in lowering its overall environmental impact though most have been in relation to alternative fuels rather than composite raw materials. In November 2023, Virgin Atlantic used a Boeing 787 with Rolls Royce Trent 100 engines to fly from London Heathrow to New York JFK, taking the world's first 100% sustainable aviation fuel flight. Airbus continues work on its ZEROe project that aims to bring to market the world's first hydrogen-powered commercial aircraft by 2035.

Performance requirements probably require that primary and secondary structure components will continue to remain in carbon fibre, however, parts for smaller aircraft and additional parts of the commercial aircraft interiors market seem to offer some interesting potential for natural fibres.

BioGear is a helicopter landing gear blending carbon and Flax fibre prepreg materials, that has been developed by Italian companies Fuko and Turtle. This novel project was nominated as a finalist in the 2024 JEC innovation Awards in the aerospace parts category. Biogear delivers an impressive 60% weight saving versus traditional metal landing gear, meeting the CS.27 specifications and exceeding the emergency landing requirements (CS 27.727). BioGear combines its lightweight overall design with recycled carbon fibre and natural Flax fibres to deliver exceptional vibration damping and a significantly improved carbon footprint.

Performance and quality will clearly remain the key selection factors for the aerospace market but it is clear that Flax and other fibres are being considered for certain applications. Alliance for European Flax-Linen & Hemp will continue to support its members and manufacturers servicing the aerospace community, providing validated traceability and quality updates in line with its environmental goals.

SPORT & LEISURE

Combining performance and sustainability

The world of sporting goods has always been a key adopter of Flax and Hemp materials. Not just because clients remain focused on equipment that has a lower environmental impact, but also because of the extraordinary properties natural fibres bring to the mix.

At JEC World 2023, Alliance for European Flax-Linen & Hemp published a new technical report that details the vibration damping benefits of Flax and Hemp fibres in composite structures. Many sporting goods manufacturers have embraced these properties, exploiting them to craft more comfortable equipment that allows athletes to perform better and for longer.

The Alliance will focus on the importance of Flax and Hemp fibres in the sporting world by displaying several key examples on its stand at JEC this year. Babolat's Pure Aero tennis racquet with NF2 TECH (Natural Flax Filtration Technology) inserts developed with **EcoTechnilin**, the Adidas Metalbone #GREENPADEL that uses **Bcomp ampliTex™** Flax fibres to replace carbon and glass fibres, reinforcements, and Rome snowboards work with **EcoTechnilin** to integrate Flax textile reinforcements into their boards all highlight the performance gains realized.

One of the more novel applications created recently sees Ino Holds launch its Greenmix Technology for wall mounted climbing holds. Using a bespoke recipe, designed and formulated by eco-material research centre **frd-codem**, with recycled PET (11% of the Greenmix compound) and natural Hemp fibres (25%) to the material has created new holds are 40% lighter and 23% stronger than traditional PE holds whilst also being more respectful of the environment.



Another relatively new manufacturer bringing Flax fibre to the ski slopes is Ferreol Skis. This company designs and manufactures all of its skis in Quebec, Canada, and is focused on significantly improving the environmental impact of its skis as well as producing a range of fun and flexible skis that users can adapt and use across several types of snow and piste conditions. Ferreol worked directly with **Bcomp's** engineering team to create a ski – the Ferreol Surfeur 112 – using both biaxial and unidirectional **ampliTex™** Flax reinforcements, that reduces overall carbon footprint by nearly 30% with no compromise on the performance and durability.

Flax fibres are also making inroads in watersports. German kiteboard builder Spleene has recently used **Bcomp** Flax fibre reinforcements to help shape their Eco Line RIP 39 board. The new board, on display at the Sicomin booth 6G41, was developed via a 2-year collaboration with the Technical University of Applied Sciences Augsburg. It combines Spleene's unique design with the added vibration damping of natural Flax and bio-resin laminates, enhancing the board's explosive pop for tricks and jumps, and improving long-term rider comfort that keeps riders on the water for longer.

Notox surfboards will also present its latest artist collaboration with Luc Rolland at the **Despestele** booth. Luc's handcrafted, one-of-kind, Flax reinforced board, featuring 2D woven cloth from **Despestele**, meets the same Gold Level of the Ecoboard sustainable surfboard project as all other Notox production boards.



JEC will celebrate the Olympic and Paralympic Games 2024 in Paris, curating an exhibition at the entrance to Hall 6, that showcases the close ties between composites and sports.

JEC has commissioned Ignaas Verpoest, Emeritus Professor, Composite Materials Group, Katholieke Universiteit Leuven [Belgium], Véronique Michaud, Associate Professor, Head of Laboratory for Processing of Advanced Composites at Ecole Polytechnique Fédérale de Lausanne [EPFL, Switzerland], and Helena Teixidó, PhD in Composites from EPFL, and Linde De Vriese, team leader of the Composite Lab of SIRRIS [Leuven, Belgium], to create the display that will feature Flax composite parts including a **Notox surfboard, a skateboard from Akonite, an equestrian helmet by Egide Paris and a Babolat tennis racquet.**

MARINE

Flax fibre mass production takes a step forward

The second half of 2023 saw a number of key marine Flax fibre composite projects launched for the first time. **Greenboats** launched their new 9.14 metre MB9 sailing yacht and Danish architects SAGA Space Architects, collaborating with students from the Swiss Institut auf dem Rosenberg in St Gallen, also showcased a scale model of their Blue Nomad solar-powered floating houses: with both projects featuring Flax reinforcements.

The MB9 is a Matthias Bröker design that is almost entirely built from **Greenboats** signature natural fibre composites. Only the keel fin and rudder shaft use carbon fibre, whilst the hull is strip planked in Flax covered balsa sandwich planks before being laminated with vacuum infused epoxy skins. Developed for single and double handed sailing by its designer, the boat will carry white sails of around 55m² (plus a 70m² spinnaker) and weigh only 3.05 tons when ready to race, suggesting the sailing performance should be very interesting.

Greenboats certainly had a busy 2023, celebrating 10 years in business, securing investment from Flax fibre specialist **Depestele** and also reaching agreement to expand production capacity with Bremen based composite manufacturer Fassmer. Whilst much of this expansion will be linked to business outside of the marine segment, the additional production workspace and the large flat panel press for sandwich panels, will definitely give **Greenboats** some additional firepower for their next yachts too.



Launched at design shows in London and in Monaco, the Blue Nomad habitat concept uses natural Flax fibres to create a floating shelter that could accommodate users in case climate forces people to move as sea levels rise. **Bcomp's ampliTex™** Flax reinforcements were used for the scale model and the Blue Nomad project team are already planning a full scale solar powered journey across Europe in their unique 2 person floating habitat.

Whilst we have focused here on small scale and concept projects, marine industry Flax fibre composite production is definitely ready to scale up. Beneteau and Outremer have both demonstrated that mainstream marine production can easily accept natural fibres and, together with its members, the Alliance is eagerly awaiting the next stage of development.



DESIGN & LIFESTYLE

Manufacturers extend the colour pallet

In the design and lifestyle sector, the structural performance of a material is not necessarily the most important factor in its selection. Visual appearance is key and, as Flax and Hemp material producers look to increase their adoption in the design field, JEC World 2024 will see several Alliance members extending the colour pallet and offering far more than natural Flax fibre colours. If consumers are also able to include an improved environmental footprint when making their purchasing decisions, coloured sustainable Flax and Hemp fibre materials can provide interesting combination of properties that can be hard for traditional composites to match.

CultureiN, who have returned to JEC this year after a successful first exhibition in 2023, will launch a refreshed pallet of 24 shades of their **Varian®** material at this year's show. **Varian®** is a bio-based thermoformable blend of Flax and thermoplastic yarns, and was initially conceived as a functional, decorative, and material option for interior architecture, design, lighting, automotive, aeronautical, and luxury goods. Featuring natural, pearlescent and black shades, the new shades in the colour range allow designers to extend their horizons and create amazing new combinations.

Terre de Lin will also provide coloured options for their materials at JEC World 2024. In contrast to **CultureiN**, **Terre de Lin** will supply 100% dyed Flax fibre coloured rovings that manufacturers can then incorporate into their own production process. These untwisted parallel fibre 200 to 2400tex rovings are chemical free and can be customized to suit each application as the colour is added at the fibre stage. The new coloured rovings are optimised for easy thermoset or thermoplastic impregnation and can be used across many typical composite production processes.



Additional products that focus on availability, ease of processing and ready-to-use intermediate products will also be on show at JEC for the high-volume design & lifestyle field, with both **Demgy** and **Libeco** continuing to refine product offering.

Flaxcomp® clear is a **Demgy** product that was launched at JEC World 2023, that has been continually optimised to combine lightweight, recyclable, high-volume thermocompression and injection overmoulding processing with the unique look of a woven natural Flax 2x2 twill reinforcement. The highly customizable technology is being targeted at high production rate markets such as the automotive interiors, luxury goods and sport & leisure sectors.

Libeco, a longstanding member of the Alliance for Flax-Linen & Hemp but joining the Natural Fibres Village for the first time, will present its key range of 6 naturally coloured stock fabrics for the composites industry at JEC this year. A Flax weaving specialist since 1858, **Libeco** offers a range of 100% Flax, 100% pre-washed woven textiles that offer unprecedented possibilities in eco-conscious design. The UD and bi-directional fabrics are available in weights of 150-560gsm, with all 6 new variants being continuously stocked to ensure constant availability and delivery as each project requires.



Flax and Hemp material formats for composites

Alliance members work with a broad range of Flax-Linen and Hemp fibres to create raw materials and intermediate products including yarns, rovings, technical textiles (two-dimensional woven, hybrids, unidirectional, non-crimp, warp knitted and non-woven), prepregs, consolidated panels and laminates.

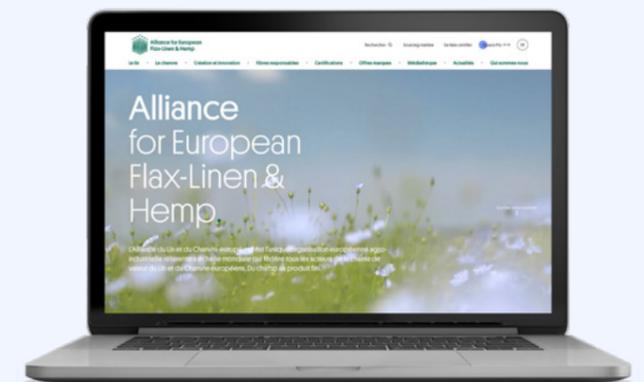


Alliance for European Flax-Linen & Hemp and its European Scientific Council has also co-published three technical publications with the JEC Group that provide detailed market insight and an overview of the optimum processing methods and possibilities when using Flax and Hemp for the production of composites.

These publications are available from the JEC e-store here: <https://www.jeccomposites.com/e-store/>



Find more information about solutions and suppliers at Alliance website Directory of Members: allianceflaxlinenhemp.eu





Alliance for European Flax-Linen & Hemp presents latest technical reports on fibre functional properties

Alliance invests in providing valuable technical information for those planning to use Flax and Hemp fibre composites, providing detailed environmental or scientifically proven technical reports and guidelines that assist users in obtaining the best results possible.

Alliance for European Flax-Linen & Hemp has recently published two technical reports in its open-source library. The first is titled “*A Moisture Sensitivity Technical Guideline*” and details the best practice guidelines on handling moisture sensitivity with Flax and Hemp fibres, whilst the second report, “*Vibration Damping in Flax & Hemp Fibre Composites*” contains highlights of scientific literature which allow the damping properties of Flax and Hemp fibre composites to be positioned alongside a broad range of materials.

The moisture sensitivity guideline has been created by the Alliance’s European Scientific Council, which gathers experts to demonstrate and detail the advantages of technical Flax and Hemp fibres in composites. Based on an industrially relevant scientific literature review, the new moisture sensitivity report recognizes the unique properties of Flax and Hemp fibres and the potential challenges of using them in composites that are exposed to high humidity or that come into direct contact with water. Delivering clear best-practice guidelines for manufacturers (differentiated for both indoor and outdoor use) and detailed analysis of the impact of humidity and moisture absorption on composite performance, the Alliance takes responsibility for delivering realistic, scientifically validated data for the composite sector.

Flax and Hemp fibre composites represent extremely good choices for light-weight composite applications due to their excellent mechanical properties, low density, and minimal environmental footprint. Moreover, Flax and Hemp fibre composites have outstanding vibration and sound damping properties leading to quieter surroundings, enhanced user comfort and improved safety in many applications.

The latest vibration damping report was also drafted by the experts of the enlarged European Scientific Council. It is based on the literature review of Taiqu Liu, Pauline Butaud, Vincent Placet and Morvan Ouisse from the FEMTO-ST Institute, University of Bourgogne Franche-Comté, France and includes additional contributions from Alliance members, making this report the most comprehensive subject review available to date.



Media library:

<https://allianceflaxlinenhemp.eu/en/european-flax-linen-hemp-media-library/10/a-moisture-sensitivity-technical-guideline>

<https://allianceflaxlinenhemp.eu/en/european-flax-linen-hemp-media-library/3/vibration-damping-in-flax-hemp-fibre-composites>

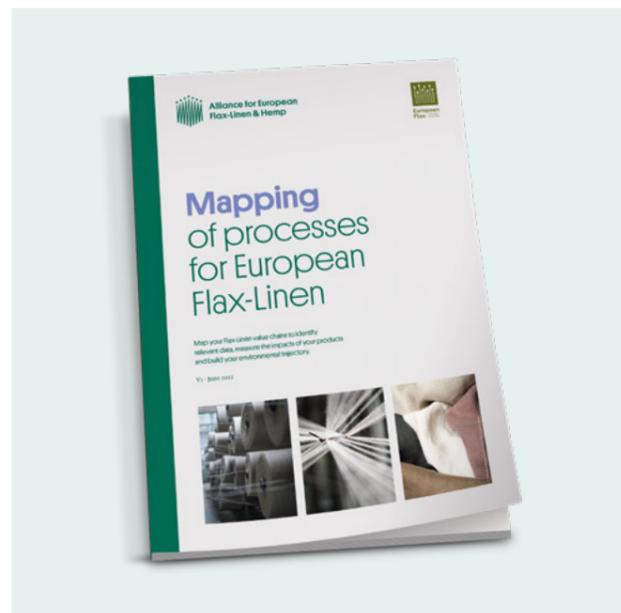
Alliance for European Flax-Linen and Hemp presents latest work package to upload European Flax™ Life Cycle Data to the version 3.10 ecoinvent database

The Alliance works to promote both the sustainability credentials and the many advantageous properties of Flax and Hemp in its work to enable the most innovative natural fibre solutions. It takes the technical lead for the industry, and as the only European agro-industrial organization federating all the stages of the production and transformation of Flax and Hemp, the Alliance has pioneered the development of scientifically verified data and reports to allow manufacturers to better evaluate their environmental footprint.

With European Flax™ as the benchmark raw material, the Alliance has previously published its life cycle analysis (LCA) for European Flax™ scutched long fibre, compliant to the Product Environmental Footprint (PEF) method version 2.0 in 2022, and collaborated with the European Commission's data providers in order to develop and integrate a European Flax™ scutched long fibre dataset in the 2023 released database EF 3.1.



The full LCA report, as well as link to EU 3.1 database to use the valid dataset, are available on: <https://allianceflaxlinenhemp.eu/en/environmental-impact-european-flax>



Continuing to extend the environmental trajectory, Alliance is pleased to report that European Flax-Linen fibre Life cycle data is now also integrated into the version 3.10 ecoinvent database. Before this data upload in November 2023, no data representing the leading Flax-Linen geography – Western Europe – existed in the database.

Faced with environmental and climate emergency, societal and consumer expectations and upcoming regulations, industries and brands need robust environmental data from their value chains, particularly raw materials, in order to calculate the impacts for their semi-products, components and, finally, finished products.

This release underscores the importance of industry database collaboration and the willingness of the Alliance for European Flax-Linen & Hemp to share Flax-Linen sector data in a transparent manner.

By adopting a flexible approach, the European Flax™ fibre data remains adaptable to the industry's future needs and evolving methodologies, and available in those two major and complementary databases:



- **ecoinvent**, a global leader publishing the world's most comprehensive environmental life cycle inventory database. It has +5000 users from all industry sectors and is used in connection with all major LCA softwares. This collaboration was governed by a dedicated agreement.
- **The official EF 3.1 database from the European Commission**, released in January 2023 as part of the framework PEF [Product Environmental Footprint] where the data is available free of charge for studies compliant to PEF / PEF Category Rules [PEFCRs]. This inclusion results from collaboration between the Alliance and a consortium including ecoinvent and Blonk consulting. The Alliance is also involved as a voting member of PEFCR Apparel to co-construct sectorial rules for fashion and footwear. A key initiative on which upcoming European Union regulations shall be built.

“The Alliance for European Flax-Linen and Hemp enriches the composites industry by meticulously creating and updating detailed scientifically proven technical assessments.

We are proud to reinforce this commitment to providing the market with the most comprehensive environmental information, with European Flax™ data now added to the ecoinvent database. This update showcases the sustainable and functional properties of Flax-Linen in the leading material database and highlights their value for high-performance and eco-friendly solutions.

Through a fusion of innovation and rigorous research, the Alliance pioneers a path towards a greener and technically advanced future for the composites industry.”

Julie Pariset

Innovation & CSR Director
Alliance for European Flax-Linen & Hemp

Services

Alliance for European Flax-Linen & Hemp aims to position European Flax & Hemp as the preferred sustainable and high-performance fibres worldwide.

OUR MISSIONS



WE INFORM

Members, industrials and customers

OPEN EXPERTISES

- European Scientific Council:
- Harmonization
 - Standardization
 - Dissemination



WE SUPPORT

The European ecosystem and know-how

OPEN SERVICES

- Assistance in sourcing and innovation
- Technical support
- Directory of members and solutions
- Marketing tools, trainings
- Traceability: European Flax™ certification and ISO standard identification method
- Sustainability: Environmental footprint trajectory: Life Cycle Data



WE PROMOTE

European Flax-Linen & Hemp

OPEN PROMOTION

- Tradefairs
- Technical days
- Publications
- Professionnal & general public events

About



Alliance for European Flax-Linen & Hemp

The Alliance for European Flax-Linen & Hemp is the only European agro-industrial organization that serves as a global reference and brings together all players in the European Flax-Linen and Hemp value chain.

A platform for reflection, market analysis, dialogue, and strategic orientation, the Alliance for European Flax-Linen & Hemp presides over an industry of excellence in a globalized context. It encourages dialogue with national and European public authorities.

The Alliance for European Flax-Linen & Hemp creates an environment that fosters competitiveness of industrial businesses as part of its three-fold mission of informing members, brands, and consumers, supporting the European ecosystem and European expertise, and promoting European Flax-Linen and Hemp as the preferred sustainable premium fibres worldwide.

It connects 10,000 businesses in 16 European countries and bases its work on the values of solidarity, innovation, scientific validation, and respect for people and planet.

It promotes, initiates, and organizes strategic reflections and research on its fibres to be able to provide all of its interlocutors with evidence-based economic data, environmental information, and reliable scientific evidence.

The Alliance for European Flax-Linen & Hemp strives to increase the international visibility of its fibres, whose technical and environmental properties inspire global creation and open new opportunities for industrial innovation. It guarantees the traceability of Flax fibre thanks to the EUROPEAN FLAX™ and MASTERS OF LINEN™ certifications.

With its Technical Section and the European Scientific Council, Alliance for European Flax-Linen & Hemp helps its members move towards the future to discover new opportunities such as high-performing composite products. This Section brings together fibre and semi-finished product suppliers, preparers and processors, serving as a bridge between the requirements of the multi-segment industry and the value chain's industrialization capacity for technical Flax and Hemp applications.

The Alliance for European Flax-Linen & Hemp is the new name of the CELC, an association founded in 1951. Western Europe is the number one Flax-producing region in the world (France, Belgium, and the Netherlands account for 3/4 of production).

European Flax™: A traceability guarantee for premium Flax fibres grown in Western Europe for all markets. It is a plant-based fibre, the product of ecofriendly agriculture grown without irrigation or GMOs.*

*barring exceptional circumstances

As the technical authority which unites the European Flax-Linen & Hemp industry, our success is built on transparent communication and the open democratization of our expertise, technical services, and marketing promotion. Innovation and CSR are also key strengths of the Alliance, with our experts available when further information is required. Visits to the Alliance for European Flax-Linen & Hemp research laboratory are also possible on request.

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