European Hemp fibres for diverse biobased products

The perfect green material

- good mechanical properties
- good for the environment
- good availability at a low cost
- modern industry with high social standards
- no competition with food production
- fits perfectly with your sustainable business
- reduction of CO_2 emissions

Discover natural fibres 2009

International Year of Natural Fibres

This brochure shows you many examples of hemp fibre based products, which are already introduced and established on the market, and where you can buy European Hemp Fibre.



Editor: The European Industrial Hemp Association (www.eiha.org)



Join EIHA to support the Hemp Industry.

Basic Information on European Hemp

Hemp fibres played an important part in the technical and cultural history of mankind. In 2.800 BC the first ropes were produced in China using hemp fibres. In 100 BC we know that also in China the first paper in the world was made from hemp fibres. From the Middle Ages until the end of the sailing ship period Hemp was an important crop in many European countries. Threads, sacks, ropes, water hoses, sails and textiles were all made from Hemp fibres.

Today, China, Canada and Europe are the main hemp cultivation areas in the world. In 2008 the total cultivation area in the European Union was around 15.000 ha – in 2009 we expect this to increase to 18.000 ha. These areas will produce around 24.000 t Hemp fibres and 29.000 t respectively. All by products like shivs (woody part of the Hemp stem) and dust are used. Main countries for Hemp production are France, UK, Germany, The Netherlands and Poland. Hemp fibres, ready to use in your biobased products are price competitive to other domestic and exotic fibres for technical applications. Different qualities are available.

European Hemp fibre is currently used mainly in technical applications like speciality paper (cigarette paper, technical filters), insulation material, natural fibre reinforced plastics (automotive, industrial and consumer goods), mulch and cultivation fleeces. Especially insulation and plastic reinforcement show promising market increases. China and Canada are raising their interest for hemp fibre in textile applications substituting cotton fibres.

The European Industrial Hemp Association (EIHA)

EIHA has formed itself as an association of Regular members, the Hemp primary processing companies within the EU and Associate members who are associations, national organisations, companies and individuals working in the field of Hemp or other natural fibres. Founded in 2005 EIHA today has 9 regular and over 60 associated members from 30 different countries.

EIHA was formed originally to give members a voice at the European Commission in Brussels. It has grown quickly into a respected Organisation that is an excellent bank of information and a real support to the fast developing Hemp Industry. Each annual EIHA conference allows members and non members alike to exchange views and important developments with their colleagues.

The European Hemp industry is a young and modern industry with new and improved harvesting and fibre processing technologies. It maintains high social standards, it is good for the environment with a proven high CO_2-capture. Importantly Hemp does not compete with food production.

Along with a high yield, Hemp produces fibres of the highest quality. Their mechanical properties are equal to the best natural fibres in the world.

Hemp Fibres today are already used in many applications: speciality pulp and paper, automotive, brakes, cases and consumer goods. Sanding discs, insulation, construction, agriculture, sports equipment and many more.



Innovation

Hemp will and is playing an important role in the production of innovative biobased products like natural fibre reinforced plastics, insulation and construction materials.

Hemp Fibre can improve the technical profile of bioplastics for use in durable applications.



Insulation material, hemp fibre fleece (Germany). Pictures: Hock

High carbon capture by Hemp insulation.



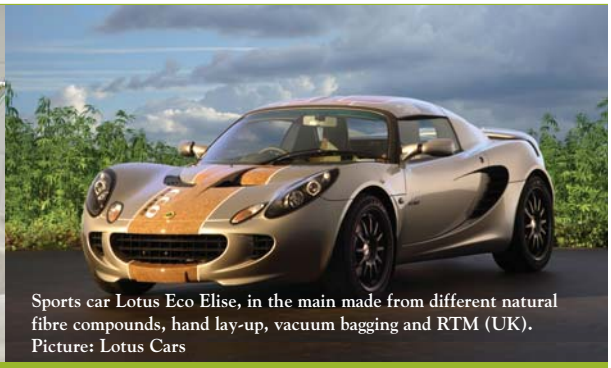
Hemp fibre brake pad for regional trains (UK).
Picture: nova-Institut



Hemp fibres ready to sell.
Picture: nova-Institut



Basin, hemp fibre and thermoset, Resin Transfer Moulding (RTM) (The Netherlands). Picture: NPSP Composites



Sports car Lotus Eco Elise, in the main made from different natural fibre compounds, hand lay-up, vacuum bagging and RTM (UK). Picture: Lotus Cars

Hemp is good for agriculture, the environment and enhances regional development.

Innovation



Cases, natural fibre and polypropylen, compress moulding (Germany). Pictures: Hempro International, Winter & Linotech



Urn, hemp fibre and bioplastics, compress moulding or injection moulding (Germany). Picture: nova-Institut



Natural fibre door panel for BMW 5 Series, compress moulding (Germany). Pictures: nova-Institut



Hemp fibre pellets for granule production.
Picture: nova-Institut



Hemp fibre PP-granules.
Picture: nova-Institut



Cress mat – hemp fibre fleece (UK/Germany).
Pictures: Hemcore



Professional sanding disc with hemp fibre reinforced PP-tray, injection moulding (Germany).
Pictures: nova-Institut



Toy cars, natural fibre and Polypropylen, injection moulding (The Netherlands).
Picture: GreenGran

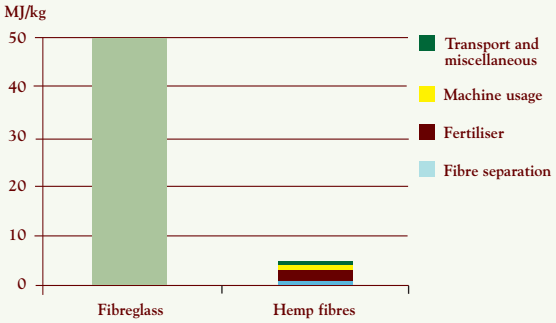
Environment

No agrochemicals are used in the growing Hemp crop.

The Cumulated Energy Requirement for producing glass fibres is more than 10 times higher when compared to the production of hemp fibres in Europe. Also the CO_2-emissions for glass fibres are 10 times higher compared to hemp fibres.

Life Cycle Assessments (LCA): Where Hemp has been used in applications it has yielded definite ecological advantages. For example for plastic reinforcement: "Finite resources were spared, there was less pressure on the environment and CO_2 emissions were reduced. If biopolymers were used these benefits are of course further enhanced". (Carus et. al 2006)

CER_P-Cumulated Energy Requirement



Hemp processors in the European Union

In Europe you can buy hemp fibre directly from the processor. The following hemp fibre producers are members of EIHA and together they can guarantee high quality standards and a secure continuity of supply. These listed five Hemp processors produce on average each year between 10 and 15,000 tonnes of technical Hemp fibre. This is mainly used in natural fibre reinforced plastics and insulation materials. As Hemp is an annual crop this quantity can be easily increased according to demand.



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Pictures: Hemcore, BaFa, AGROFIBRE, HempFlax, Dunagro

European Hemp Fibres are available now for your biobased products!!

Many more companies are involved in the hemp industry like the non-woven, compounding and equipment industry. Please look for a full list of EIHA-members at: www.eiha.org

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