

ACCSYS
GROUP

corporate and social responsibility



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our corporate vision

advancing technologies for a better world

Accsys Technologies is an environmental science and technology company, focused on the licensing and production of environmentally friendly and sustainable acetylated wood products. A focus on corporate and social responsibility lies at the very core of our business.

Our technologies not only enable us to manufacture wood products that offer 'best in class' durability, dimensional stability and a wide spectrum of environmental advantages over alternative environmentally threatened or compromised products, but also provide attractive opportunities for licensees and our other stakeholders.

We want to ensure that our business is not only a commercial success, but that we also continue to advance technologies for a better world.



our products and the environment: part 1

accoya®

tricoya®



The main environmental benefit of our Accoya® and Tricoya® acetylated wood products is their use as a substitute for other environmentally damaging products including chemically treated woods that use toxic preservatives, unsustainably sourced tropical timbers and materials produced from energy intensive or non-renewable resources such as metals (for example, steel and aluminium) and plastics (such as PVC).

carbon footprint

During their growth, trees convert carbon dioxide (CO₂) through photosynthesis into cellulose and lignin and emit oxygen in the process. As a result, during their lifespan trees act as carbon sinks, since CO₂ is captured from the atmosphere and makes up approximately half of the dry weight stored in the wood of the tree. The carbon is stored in the living tree, but will also remain stored once the tree is felled and the wood of the tree is used for products such as Accoya® and Tricoya®. As a consequence, CO₂ is locked out of the natural carbon cycle during the lifespan of the wood or wood product. Through decay or incineration, the carbon will eventually be released again into the atmosphere in the form of CO₂. This means that the use of renewable materials such as wood can be perceived as CO₂ neutral (if CO₂ emitted during production and transport of wood products is not taken into account).

In producing Accoya® wood, we improve this carbon capture mechanism in two ways. Firstly by using fast growing softwood species, such as radiata pine, as input for our acetylation process. Per hectare, more cubic metres of radiata pine can be grown (20-28 m³/ha/yr) compared to slower growing wood species such as teak (6 m³/ha/yr) or even most bamboo (10 m³/ha/yr). Consequently, a larger amount of carbon is sequestered compared to slow growing wood species.

Secondly, through the acetylation process the dimensional stability and durability (durability class 1 according to EN standard 350-1) of a wood species are improved considerably, lengthening the product lifespan. Thus Accoya® wood is able to act as a longer term carbon sink that needs less additional care, such as coatings maintenance, as compared to other woods. These unique properties allow us to warrant Accoya® wood for 50 years above ground and 25 years below ground (please see our Certificates of Warranty for full details).

life cycle assessment

Besides having a low carbon footprint, Accoya® wood provides additional environmental advantages in the use phase, such as lower maintenance requirements due to its higher dimensional stability, a longer lifespan and a high value for thermal insulation which means improved energy efficiency. This has been shown in Life Cycle Analysis (LCA) work carried out by various independent research institutes following recognised norms such as ISO 14010. These include EMPA and the Swiss Institute 2007. EMPA confirmed that the application of Accoya® wood in window frames over a life span of 60 years gives a 19-26% better performance compared to window frame material alternatives such as wood, PVC and aluminium.

non-toxic

In contrast to wood products that achieve durability via treatment processes (such as chromate copper arsenate (CCA) or alkaline copper quat (ACQ) treatments), our product is 100% non-toxic and does not leach harmful substances into the environment. Since Accoya® wood is modified to the core it has outstanding durability and there is no need to field treat the wood with additional toxins when it is cut or drilled as with envelope treated woods. Accoya® wood offers a real alternative to these types of products.

our products and the environment: part 2



Camco carbon footprint report

In 2009 we commissioned Camco, a leading independent environmental consultancy group, to report on the carbon footprint of Accoya® wood so that we could better understand our product, its impact on the environment and identify where further improvements were possible. Camco's report resoundingly supports Accoya® wood's carbon sequestration credentials and contrasts Accoya® wood with other woods and man-made construction materials that it can replace, such as aluminium, PVC and steel. These materials do not sequester carbon and during production emit a considerably higher amount of carbon dioxide. Camco reported that, for example, in the production of aluminium over 140 times more CO₂ is released into the atmosphere per cubic metre than in the production of Accoya® wood. Copies of Camco's report are available upon request from our offices.

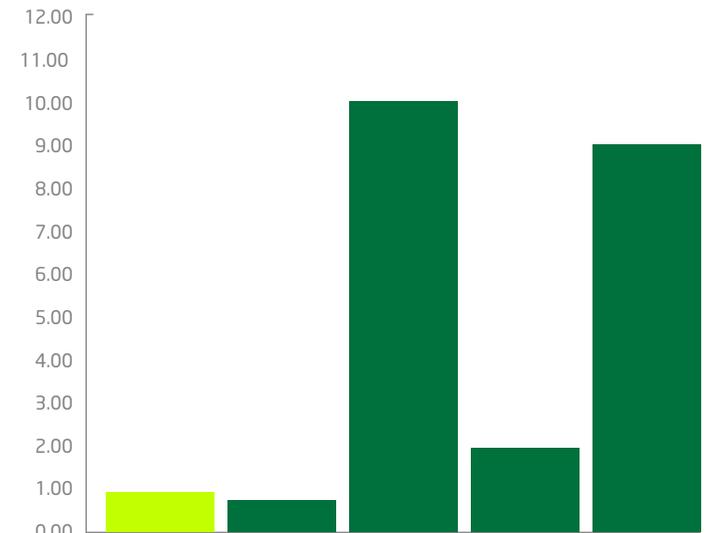
The Camco report figures show the annual greenhouse gas emissions per cubic metre of Accoya® wood, published in kg CO₂ equivalent, and translated into real life applications in order to account for the use-phase aspects. They take into account that over 50% of the minimal energy required to make Accoya® wood comes from renewable sources.

In this application-based cradle to grave assessment, aspects such as material use, durability, carbon sequestration and maintenance were taken into account for a fair comparison with other building materials. The figures exclude the end-of-life phase, which could provide additional carbon advantages to wood products, including Accoya®, in the case of incineration for energy production (substitute for fossil fuels). It can be concluded that Accoya® wood is one of the very few man-made construction materials verified by an independent environmental consultancy group to have such an advantageous carbon footprint.

By understanding this, one can begin to appreciate the impact that Accoya® wood and Tricoya® wood elements can have in slowing the accumulation of CO₂ in the atmosphere that contributes to climate change.

In the case of Sneek Bridge I, Camco reported that 210 tons of CO₂ is sequestered by Accoya® wood (calculation based on use of acetic anhydride produced through carbonylation). This number includes the emissions required to produce Accoya® wood. This shows that Accoya® wood may act as a true carbon sink, and in some cases can even act as a carbon negative material. This stands in strong contrast with engineered materials such as steel and concrete which are unable to sequester CO₂ and emit a large amount of greenhouse gases during production (13884 kg CO₂ equivalent / m³ for steel and 495 kg CO₂ equivalent / m³ for concrete produced).

Annual emissions per window frame (kg CO₂ eq/yr)



our products and the environment: part 3



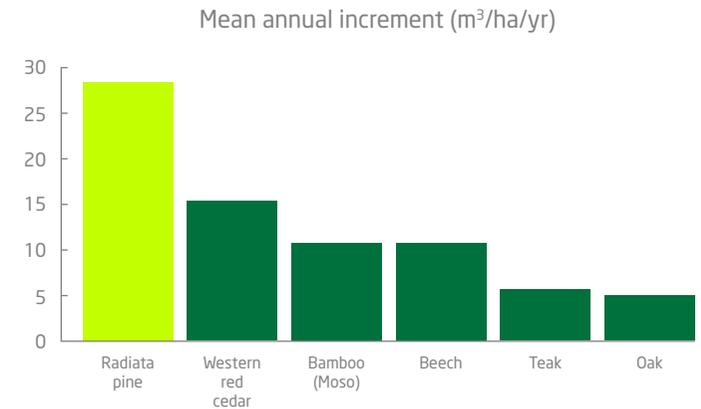
sustainable forestry

Wood sourced from sustainably managed forests and plantations is an environmentally responsible resource, which is, in theory inexhaustible. Nevertheless, the demand for durable wood from certified forests is higher than the supply, as Greenpeace International (2007) confirms: "Support for the FSC label is high among major purchasers and retailers of forest products, but the tens of billions of dollars in market demand for FSC products still far exceeds supply".

Our products therefore offer an "in demand" sustainable alternative to tropical hardwoods. The fast growing, high yield renewable softwoods used in producing Accoya® wood can be grown and harvested in 25 years, unlike tropical hardwoods that take over 100 years to mature. The yield that can be obtained from radiata pine, the primary softwood used to produce Accoya® wood, can be seen opposite.

The wood we use is harvested from FSC, PEFC and other certified sources giving ourselves, our customers and our investors comfort that our supply forests are managed in a sustainable way and are sensitive to the needs of the local environment. We oblige all our licensees to adhere to our requirements in this regard.

Our procedures and practices are assessed annually by the independent certification body Control Union (www.controlunion.com) to ensure that we meet FSC and PEFC Chain of Custody guidelines. Directives and procedures regarding FSC and PEFC regulations are an integral part of Accsys Technologies' quality management system.



The mark of
responsible forestry

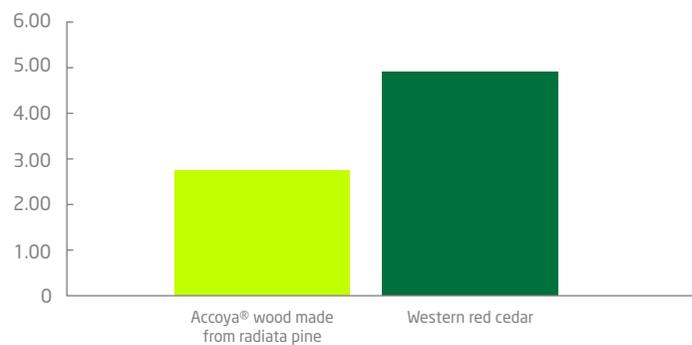




continuing research

Through our research and development group we are continually looking for ways to develop our technologies and products to make them more energy efficient and to reduce as far as possible any adverse impact on the environment.

Annual transport emissions (kg CO₂ eg/m³/yr)



One such area is that of timber sourcing. Radiata pine, sourced from a variety of locations, is the species currently used to produce most Accoya® wood. Research shows that, although the intercontinental transport distance may be high, in many instances the annual transport emissions of acetylated radiata pine are competitive when compared with various continentally sourced timber species. This is due to the efficient low emissions transport used (sea transport), low weight, and lifespan improvement through acetylation. For more detailed background information please refer to the Timber Transport Emissions Calculator available on our website.

Nevertheless, we are currently engaged in comprehensive species testing with the end goal of being able to commercially modify wood species that are most local to any of our current and potential licensees, wherever they may be in the world. That means reducing the need for transporting raw wood and therefore reducing our carbon footprint further still. Improving efficiency within our plant in Arnhem in order to achieve higher batch volumes, shorter batch times, lower energy consumption and improved renewable energy content is an ongoing goal. We are also investigating ways to directly recycle by-product acetic acid and upgrade it to acetic anhydride on site, for a closed loop system.



engaging with local communities: part 1

We actively engage with local community projects as far as possible on a pro-bono basis. By so doing we hope to:

- showcase the high performance of our products;
- draw attention to the viability of “green” products;
- assist local communities in reaching their goals.

Examples of these efforts include the construction of the Sneek Bridges in the Netherlands, and the Green Life Smart Life Project, a green home building project in the US.

In support of the London Capital Clean Up campaign, Accsys Technologies also donated Accoya® wood to The Rosemary Works Community Association. Accoya® wood was used to make raised planters, which have been installed on the edge of Regent’s Canal, London as part of its regeneration.

We are also proud to have supported the London homelessness charity, St Mungo’s. Accoya® wood products, including decking, compost bins and outdoor furniture have been crafted in St Mungo’s wood workshop in London, where homeless people develop new skills that will enable them to move on to further training and qualifications to help turn their lives around long-term. The items that St Mungo’s made were showcased at The Eden Project’s ‘Places of Change’ garden at the 2010 RHS

Chelsea Flower Show in London. The ‘Places of Change’ garden was an ambitious collaboration between a national housing and regeneration delivery agency, The Eden Project and frontline homelessness agencies. Its aim was to use a sustainably constructed, high profile garden to challenge stereotypes around homelessness.

Accsys Technologies sponsored the University of Florida’s International Solar Decathlon entry in 2010. This award winning program helps educate current and future building industry practitioners in the use of sustainable materials and energy efficient designs.



engaging with local communities: part 2

reconstruction efforts in Haiti

Accsys Technologies partnered with non-profit organization Architecture for Humanity to raise funds for sustainable reconstruction in Haiti. For every Greenbuild 2010 Expo attendee who participated, Accsys Technologies donated \$10 towards the group's Earthquake Reconstruction Program in Haiti.

The funds raised were used to sponsor an architect working in Haiti for one month under Architecture for Humanity's Design Fellowship Program, enabling the organisation to continue its efforts to rebuild the infrastructure in Haiti that was destroyed in the January 2010 earthquake. The nonprofit design services firm is running several reconstruction programs in Haiti, including an initiative focused on the design and construction of 10 primary and secondary schools. Designs will emphasise hurricane and earthquake-proof construction, climate sensitive/passive cooling techniques, community-centred design and development, local materials and the stimulation of local economies.

Accoya® helps kids have the holiday of a lifetime

In summer 2010 we were the proud sponsor of a group of young cyclists who participated in Holland's 'Ome Joop's Tour'.

This annual event aims to give 180 elementary school children from deprived backgrounds and who would not otherwise have a holiday an unforgettable and fulfilling ten day break. Thirty teams of six children cycled in a colourful procession through the beautiful Dutch countryside, participating in different events and activities along the way, making new friends and enjoying companionship and teamwork. Sporting yellow t-shirts and big smiles 'Team Accoya' pedalled hard and had a wonderful time.

health and safety



Accsys Technologies is committed to maintaining a healthy and safe environment for all its group employees, licensees, business partners, customers and the communities in which we operate.

Our plant in Arnhem, the Netherlands, uses acetic anhydride in the production of Accoya® wood and generates acetic acid as a by-product of acetylation.

We mitigate any marginal health and safety risk associated with these chemicals and the production process as a whole by regular inspections to ensure our plant is fully compliant with legal and regulatory health and safety requirements. Our wholly owned subsidiary company, Titan Wood BV, ensures operation of the facilities meet the highest health and safety standards and are in accordance with our bespoke Health and Safety Policy. The Health and Safety Policy provides for:

- monthly staff meetings to discuss health and safety matters;
- the promotion of knowledge of our employees and their input in the field of health and safety;

- the promotion of a safety conscious attitude amongst employees;
- reducing as far as possible the use and exposure of employees to harmful substances;
- encouraging the development of better, safer and healthier working methods and equipment to prevent distress and/or material damage arising from work and work related accidents;
- addressing the root causes of potential dangers, preventing situations that may otherwise lead to accidents;
- the proper design of our production facility;
- regular maintenance and inspection of our facility;
- selecting suppliers according to our requirements for health and safety in addition to quality and environmental concerns.

The health and safety measures taken by Titan Wood BV have helped ensure there have been no material health and safety issues in any part of the business.





our employees and office

Our employees are vital to achieving our corporate vision. We strive to build real collaborative team spirit, where each employee feels valued and their individual needs are listened to.

We are committed to upholding the basic principles of equality and fairness by treating all of our employees with respect and doing our best to ensure that all of our business partners adhere to the same code. We do not tolerate the harassment or intimidation of any of our employees, and all employees are encouraged to bring any such issues to the attention of either senior management or their Human Resources contact.

We will seek out and employ the best qualified personnel regardless of race, religion, belief, ethnic background, nationality, age, marital status, sex, sexual orientation or disability. We believe that diversity should be encouraged and inclusion should be the norm.

Each of our groups' offices in the United Kingdom, the Netherlands and the United States promote an environmentally friendly policy. We believe even small actions contribute to our overall goals. For example, we use either 100% recycled paper or paper produced from wood pulp harvested from sustainable forests and encourage a policy of recycling by providing recycling bins in the office. Our employees are expected to switch off computers, lights and other electrical goods when not in use to conserve energy. Our offices are also being fitted with energy efficient light bulbs.



our business partners

We want our own activities and also those of our licensees, suppliers and other business partners to be socially and environmentally responsible. We are committed to a policy of minimising any negative social and environmental impact that may flow from our activities and expect the same high standards from our business partners.

We expect the suppliers of all our wood to meet the strict chain of custody criteria set out by either the Forest Stewardship Council (FSC®) or other similarly reputable and internationally recognised certification schemes. In addition, we will remain compliant with the EU Timber Regulation (EUTR);

We expect the suppliers of our other key raw materials to comply with our Supplier Code of Conduct or to have confirmed their support for the principles of the UN Global Compact, which is

committed to ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption.

We are committed to upholding the basic principles of equality. In particular, we expect our business partners:

- to provide a healthy and safe environment for their staff, customers and visitors, and to comply with all applicable local environmental, safety and health regulations;
- not to engage in or support the use of child labour;
- not to use forced labour (for example prison, indentured, bonded) and subject to local legislation, allow all employees the right to free assembly and collective bargaining;

- to provide an equality of opportunity and not discriminate against any worker on any grounds of age, sex, marital status, disability, colour, race, religion, nationality or ethnic origin;

- not to engage in harassment or intimidation of employees or support the use of corporal punishment, mental, physical, sexual or verbal abuse;

- to comply with all applicable wage and hour laws and regulations in their relevant jurisdiction, including minimum wage, overtime and maximum hours.



recognition and endorsements



For the South East Asian market we have attained the highly regarded Green Label of the Singapore Environment Council. The Singapore Environment Council (SEC) was set up to promote environmental awareness in South East Asia. The 'Green Label' was set up to reward environmentally friendly products sold within the region with eco-labels that can only be obtained by compliance with the strict eco standards specified by the SEC's scheme.



Accoya® wood is one of the very few building products to have acquired Cradle to Cradle SM Gold Certification by MBDC. Cradle to Cradle Certification provides a means to tangibly and credibly measure achievement in environmentally-intelligent design and helps customers purchase and specify products that are pursuing a broader definition of quality. This includes using environmentally safe and healthy materials and instituting strategies for social responsibility.



Accoya® wood won the prestigious International Wood Products Association award (IWPA) for Innovative excellence in April 2011 at the annual conference in New Orleans.



Accsys Technologies received the overall Dutch National Award for Sustainability Innovation, "The Columbus Egg", and the Award for Sustainable Production Technology for Accoya® wood. These awards are granted by the Dutch Government and are designed to reward sustainability innovation within businesses operating in the Netherlands.



The Future Build is a green building materials portal that helps architects, engineers and contractors - particularly in the United Arab Emirates and wider region - confidently select and source environmentally sustainable, third party certified products to meet their projects' environmental objectives. Only products that have been assessed and selected according to standards and criteria set by Masdar City, Abu Dhabi, are listed. Accoya® wood was rated as excellent or A in 2011.

DUBOKEUR®

The awarding body of the prestigious DUBOkeur® certification, Nederlands Instituut voor Bouwbiologie, issues certificates only to the most environmentally friendly products within a particular application, taking into account a range of stringent factors. This certification is of particular significance to our Dutch customers, unequivocally positioning Accoya® wood as an outstanding environmental choice for window frames according to Dutch sustainable building regulations.

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