

Chemical modification

The chemical modification of wood induces a reaction between an introduced molecule and the wood polysaccharides creating bonds and a permanent change to the wood. There are a number of chemical modification processes but this is dominated by acetylation to produce the product Accoya™ and fufurylation to produce Visorwood®.

Products

Acetylation of wood in Europe has been mainly driven by research in the Netherlands and also in Sweden. The research effort invested has been brought to fruition by the Anglo-Dutch company, TitanWood. The official

opening of the factory on 31 May 2007 has begun a new chapter in the field of modified wood as the Arnhem-based plant can modify 25,000 m³ per annum in a highly automated process. The acetylated radiata pine product is called Accoya™.

In the UK and Ireland, BSW Timber plc have sole distribution rights for Accoya™ and supplied material for Case study 3. The high durability and stability of the product have fostered partnerships with coatings manufacturers such as Sikkens who offer extended maintenance intervals for their coating systems (10 years for translucent finishes and 12 years for opaques) on Accoya™ when used as exterior joinery.

Case study 3: Chemically modified wood

Name of technology

Wood acetylation

Product

Accoya™

Material features

Appearance: Pale straw timber
 Dimensional stability: Excellent
 Durability: Very durable (Class 1)
 Coating performance: Excellent

Construction product

Exterior joinery

Case study

Craft workshops and offices, The Woodland Enterprise Centre, Flimwell, Sussex

- Architect: The Architecture Ensemble, 11 Cosmo Place, London EC1N 3AP www.thearchitectureensemble.co.uk
- Joinery manufacturer: Westgate Joinery, Sycamore House, Loughton Road, Ringmer, East Sussex BN8 5SY
- Accoya™ products used in project:
 - Pivot windows
 - Casement windows
 - Glazed personnel doors
 - Glazed 'workshop' doors
 - Display screens/'shopfronts'
- Finish: Sikkens microporous decorative stains

Further information

www.accoya.info

UK contact details

BSW Timber www.bswaccoya.co.uk

Westgate Joinery www.westgatejoinery.co.uk

Sikkens www.sikkens.co.uk

