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MODIFIED TIMBER ACCOYA[®] RADIATA PINE and ACCOYA[®] ALDER

Number: 33058/19
Issued: 20-01-2019
Replaces: 33058/18

Producer

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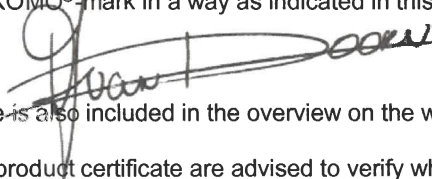
Declaration of SKH

This product certificate is based upon AD 0605 'Modified timber' dd. 20-06-2018, issued by SKH, in conformity with the SKH Regulations for Certification.

SKH declares that:

- there is a legitimate confidence that modified timber manufactured by the producer continuously complies with the technical specifications laid down in this product certificate, provided that the modified timber have been marked with the KOMO[®] mark in a way as indicated in this product certificate.

For SKH



drs. H.J.O. van Doorn, director

The certificate is also included in the overview on the website of the KOMO foundation: <http://www.komo.nl>.

Users of this product certificate are advised to verify whether this certificate is still valid; consult the SKH-website: <http://www.skh.nl>.

This product certificate consists of 5 pages.

The Dutch version shall be consulted in case of doubt.



The following has been assessed:

- quality system
- product

Periodic check

KOMO[®] product certificate

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1 PRODUCT SPECIFICATION

1.1 Description of product

The definition of Accoya[®] Radiata pine and Accoya[®] Alder in this KOMO[®] product certificate is: the product of chemical modified Radiata pine (*Pinus radiata* D. Don) and American and European Alder (*Alnus rubra* Bong and *Alnus glutinosa* (L.) Gaerth.), by means of the acetylation process. The durability of the timber has been increased in relation to the natural durability of Radiata pine and Alder, whereas a number of other properties of this timber have changed.

The performances in respect of the properties laid down in AD 0605 "Modified timber" are laid down in the "Technical specification".

2 TECHNICAL SPECIFICATION

2.1 Durability

The durability of Accoya[®] Radiata pine and Accoya[®] Alder complies at least with the requirements for durability class 2 tested in accordance with NEN-EN 350 for Use Classe(s) 1, 2, 3 and 4 according to EN 335.

2.2 Timber moisture content

Accoya[®] Radiata pine and Accoya[®] Alder is supplied with a wood moisture content under 8%.

2.2.1 Equilibrium moisture content

The equilibrium moisture content of Accoya[®] Radiata pine at a relative humidity of 65%, 80% and 90% and a temperature of 20°C is respectively 3.3 ±2%, 4.1 ±2% and 7.5 ±2%.

The equilibrium moisture content of Accoya[®] Alder at a relative humidity of 65% and a temperature of 20°C is 3 ±0.5%.

2.2.2 Water absorption

When applying Accoya[®] Radiata pine in contact with (rain) water the moisture absorption is higher to that of untreated Radiata pine.

When applying Accoya[®] Alder in contact with (rain) water the moisture absorption is lower to that of untreated Alder.

This product certificate does not express an opinion about the speed of water uptake.

2.3 Dimensional stability

The swelling in radial and tangential direction of Accoya[®] Radiata pine and Accoya[®] Alder shall, when absorbing moisture, respectively be at least 80% or 85% less, compared with untreated Radiata pine and Alder.

2.4 Glue ability

Accoya[®] Radiata pine window joints glued together with Frencken Multi-PU glue or Henkel Aquence DL 260 and hardener K102 comply with the principles of the BRL 2339 (in accordance with the SHR-report 17.0085 and the SHR-report 13.0204).

Regarding the application of the glue on Accoya[®] Radiata pine in optimized / finger jointed wood, window frames and doors this product certificate does not express an opinion and is referred to the KOMO[®] product certificate (attest-with-) of the manufacturer of the adhesive or the producer of the optimized / jointed wood, frames or doors

The product certificate does not express an opinion about the glue ability of Accoya[®] Alder.

2.5 Finish

This product certificate does not express an opinion about the finishing of Accoya[®] Radiata pine and Accoya[®] Alder.

2.6 Color value

This product certificate does not express an opinion on color value of Accoya[®] Radiata pine and Accoya[®] Alder.

2.7 Density

The density of Accoya[®] Radiata pine and Accoya[®] Alder at 20 °C and 65% RH is respectively 510 kg/m³ and 485 kg/m³.

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2.8 Mechanical properties

The average bending strength (MOR) and average modulus of elasticity (MOE) of Accoya[®] Radiata pine and Accoya[®] Alder are not negatively affected by the modification process compared to untreated Radiata pine and untreated Alder.

The density, bending strength and stiffness properties of Accoya[®] Radiata pine of A1- or A2-quality are at least equivalent to the strength properties of C22 and C16 timber according to NEN-EN 338:2016 and mentioned in the table below.

Property		NEN-EN 338 C22	NEN-EN 338 C16
Bending strength	$f_{m,k}$	22 N/mm ²	16 N/mm ²
Mean modulus of elasticity	$E_{m,0,mean}$	10000 N/mm ²	8000 N/mm ²
Density	ρ_k	340 kg/m ³	310 kg/m ³

The quality requirements of Accoya[®] A1 and A2 are defined according to "Lumber Grading Specifications – Grade Names & Definitions for Accoya[®] Radiata Pine Version 9.1" and can be found on <https://www.accoya.com/downloads/>.

2.9 Fire behaviour

This product certificate does not express an opinion about the resistance to fire class of Accoya[®] Radiata pine and Accoya[®] Alder.

3 ADDITIONAL TECHNICAL SPECIFICATION IN THE CONTEXT OF APPLICATION IN FAÇADE ELEMENTS

3.1 Burglary Resistance

This product certificate does not express an opinion of the application of Accoya[®] Alder in the production of burglary resistant façade elements.

Accoya[®] Radiata pine is applicable in burglary resistant façade elements (AD 0801; resistance class 2 NEN 5096) according to SKH publication 98-08.

3.2 Thermal Conductivity

This product certificate does not express an opinion of Accoya[®] Alder and thermal Conductivity.

The λ -value of Accoya[®] Radiata pine in the context of the determination of the thermal conductivity of wooden window frames is 0.12 W/(m*K).

4 Marking

Accoya[®] Radiata pine and Accoya[®] Alder shall be marked per package with the KOMO[®]-mark.

The execution of this mark is as follows:

- KOMO[®] trademark or logo;
- no. **33058-R** (Accoya[®] Radiata pine);
- no. **33058-A** (Accoya[®] Alder);
- modified timber, durability class 1;
- use class: 1, 2, 3 and 4 (possibly supplemented with colour and / or letter code).

Location of the mark: clearly visible on each package.



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5 SUGGESTIONS FOR THE USER

5.1 On delivery of the modified timber inspect whether:

- the products comply with the contract of sale;
- the mark and the manner of marking are correct;
- the products do not show any visible defects due to transport or similar causes.

If the products are rejected on the basis of the above, contact shall be made with:
Accsys Technologies and if desirable: The certification-body SKH.

5.2 Product certificate

It is the duty of the producer to make sure that the buyer receives a copy of the complete product certificate.

5.3 Applications and use

Transport, storage and deployment shall be in accordance with the working instructions provided by the website of the producer.

5.4 Period of validity

Consult the SKH-website: <http://www.skh.nl> to verify whether the product certificate is still valid.

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6 DOCUMENTS

AD 0605: 2018	Modified Timber;
AD 0801:2011+WB:2016	Wooden façade elements;
AD 0803:2013+WB:2016	Wooden exterior doors;
AD 0819:2010	Joining techniques in wooden façade elements;
AD 2339:2012	Adhesives for non-load bearing applications;
NEN-EN 335:2013	Durability of wood and wood-based products - Use classes: definitions, application to solid wood and wood-based products;
NEN-EN 338:2016	Structural timber - Strength classes;
NEN-EN 350:2016	Durability of wood and wood-based products - Testing and classification of the durability to biological agents of wood and wood-based materials;
NEN-EN 13501-1:2007+A1:2009	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests;
NEN 5096:2012/A12015	Burglary resistance - Façade elements with doors, windows, shutters and fixed infillings - Requirements, classification and test methods;
SKH Publication 98-08: 2015	Burglary resistant wooden façade elements.