KOMO® product certificate

Semi-manufac-tured product

SKH
Nieuwe Kanaal 9c, 6709 PA Wageningen, the Netherlands
Postbus 159, 6700 AD Wageningen, the Netherlands
Telephone:+31 (0) 317 45 34 25
E-mail: mail@skh.nl
Website: http://www.skh.nl

MODIFIED TIMBER: ACCOYA® RADIATA PINE and ACCOYA® COLOR GRAY

Number: **33058/21**
Issued: **01-04-2021**
Replaces: **33058/21 (16-03-21)**

Producer

Accsys Technologies
Westervoortsedijk 73
6827 AV ARNHEM
Tel. (026) 320 14 00
Fax (026) 320 14 98
E-mail: info@accsysplc.com
Website: http://www.accsysplc.com

Factory at

Westervoortsedijk 71
6827 AV ARNHEM

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

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1 PRODUCT SPECIFICATION

1.1 Description of product

The definition of Accoya® Radiata pine and Accoya® Color Gray in this KOMO® product certificate is: the product of chemical modified Radiata pine (*Pinus radiata* D. Don) by means of the acetylation process. The durability of the timber has been increased in relation to the natural durability of Radiata pine, 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® Color Gray complies at least with the requirements for durability class 1 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® Color Gray are supplied with a wood moisture content under 8%.

2.2.1 Equilibrium moisture content

The equilibrium moisture content of Accoya® Radiata pine and Accoya® Color Gray 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%.

2.2.2 Water absorption

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

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® Color Gray shall, when absorbing moisture, be at least 80% less compared with untreated Radiata pine.

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® Color Gray.

2.5 Finish

This product certificate does not express an opinion about the finishing of Accoya® Radiata pine and Accoya® Color Gray.

2.6 Color value

This product certificate does not express an opinion on color value of Accoya® Radiata pine and Accoya® Color Gray.

2.7 Density

The density of Accoya® Radiata pine and Accoya® Color Gray at 20 °C and 65% RH is 510 kg/m^3.

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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® Color Gray are not negatively affected by the modification process compared to untreated Radiata pine.

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 find 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® Color Gray.

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® Color Gray 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 SKH publication 98-08.

3.2 Thermal Conductivity

This product certificate does not express an opinion of Accoya® Color Gray 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® Color Gray 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-CG** (Accoya® Color Gray);

- 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	Jointing techniques in wooden façade elements;
AD 2339:2012	Adhesives for non-load bearing applications;
NEN 5096:2012/A12015	Burglary resistance - Façade elements with doors, windows, shutters and fixed infillings - Requirements, classification and test methods;
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;
SKH Publication 98-08: 2015	Burglary resistant wooden façade elements.