

MOSO® Bamboo X-treme® produkter



Shai Gil





MOSO® Bamboo X-treme®

Test resultater

Den utmerkede ytelsen til MOSO® Bamboo X-treme® har blitt testet grundig av anerkjente forskningsinstitutter. Finn et sammendrag av de viktigste testresultatene under. Fullstendige rapporter er tilgjengelig på forespørsel. **Kun MOSO® kan sørge for at du har det originale, unike Bamboo X-treme® produkt.** Andre produkter som kopierer originalen har ikke samme hardhet og holdbarhetsnivå, dimensjonsstabilitet og miljøaspekt. Med et like produkt, er det stor risiko for krav etter installasjon. Be alltid om de originale, sertifiserte MOSO® Bamboo X-treme® - produktene!



Durability of MOSO Bamboo X-treme, *Heat Treated Strand Woven Bamboo*: resistance against soft-rotting micro fungi according to CEN/TS 15083-2

Report code: 17.0083-C

Date: 29 March 2017

Page: 8/14

According to EN 350, the durability class is determined based on the x-value. To calculate the x-value, the median mass loss or the test species is compared to the median mass loss of the Beech or Pine references. Hardwoods are compared to Beech, Softwoods are compared to Pine. As Bamboo is neither softwood nor hardwood a comparison is made with both reference wood species Pine sapwood and Beech.

Based on the mass loss found and the comparison to Beech and Pine, the tested MOSO Bamboo X-treme, *Heat Treated Strand Woven Bamboo*, can be classified in durability class 1 when using the method described in EN 350.

MOSO Bamboo X-treme, *Heat Treated Strand Woven Bamboo*, performs comparable to Azobé and Merbau. Little variance is found between the different boards.

durability

CEN/TS 15083-2
(ENV 807) /
EN 350

class 1



Durability of heat treated strand woven bamboo: resistance against degradation by Basidiomycetes according to EN 350 and CEN/TS 15083-1

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Page: 8/14

According to EN 350, the durability class is calculated based on the mass loss obtained with the fungus resulting in the highest median mass loss. For all fungi the mass loss is less than 5%. This implies that, when using the EN 350 to determine the durability, MOSO Bamboo X-treme, *Heat Treated Strand Woven Bamboo* can be classified in durability class 1.

durability

CEN/TS 15083-1
(EN 113) /
EN 350

class 1



Resistance of Heat Treated Strand Woven Bamboo against blue staining fungi

Report code: 9.061-E

8 September, 2009

Page: 10/10

4 Conclusion

On behalf of Moso International BV an EN 152 blue stain test was performed on Heat Treated Strand Woven bamboo. UV- weathering was used as preconditioning of part of the samples. The combination of UV light and water spray resulted in strong discoloration of the surfaces of both the bamboo samples and the Pine sapwood reference samples.

Neither on the weathered nor on the original Bamboo samples discoloration of the blue stain fungi or the hyphae of the blue stain fungi could be observed. As a result it can be concluded that the susceptibility of this Heat Treated Strand Woven Bamboo towards blue stain is very low.

resistance against surface fungi

EN 152

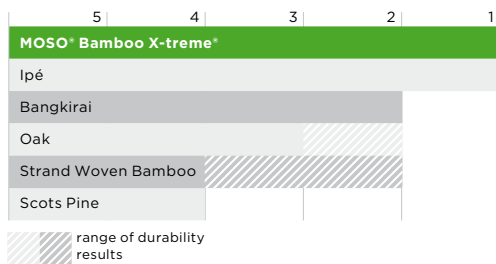
class 0

harder and more durable than almost any other hardwood

durability class

class 1

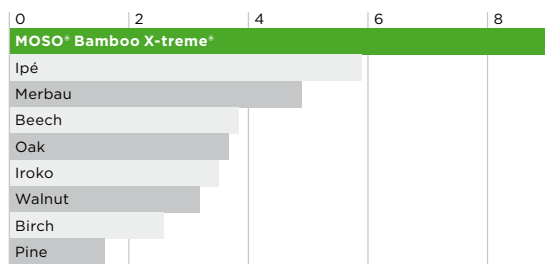
(EN 350 (CEN/TS 15083-2 / CEN/TS 15083-1))



brinell hardness

9.5 kg/mm²

(EN 1534)



Classification Durability Class

Use Class	1. very durable	2. durable	3. moderately durable	4. slightly durable	5. not durable
1 interior	o	o	o	o	o
2 moist interior	o	o	o	(o)	(o)
3 exterior, above ground	o	o	(o)	(o)-(x)	(o)-(x)
4 ground contact / fresh water	o	(o)	(x)	x	x
5 salt water	*	(x)	(x)	x	x

- o Natural durability sufficient.
- (o) Natural durability normally sufficient, but for certain end uses treatment may be advisable.
- (o)-(x) Natural durability may be sufficient, but depending on end use, preservative treatment may be necessary.
- (x) Preservative treatment is normally advisable.
- x Preservative treatment necessary.
- * Natural durability of Bamboo X-treme® not tested in salt water.

durability

EN 350 (CEN/TS 15083-2 / CEN/TS 15083-1)

class 1

use/risk class

EN 335

class 4

4. Classification and field of application	4. CLASSIFICATION AND FIELD OF APPLICATION
<p>4.1 Reference of classification</p> <p>This classification has been carried out in accordance with clause 12 of EN 13501-1:2007+A1:2009.</p> <p>4.2 Classification</p> <p>The product: BAMBOO X-TREME® DECKING, in relation to its reaction to fire behaviour is classified:</p> <p>The additional classification in relation to smoke production is:</p> <p>Reaction to fire classification: B_s - s1</p>	<p>4.1. REFERENCE OF CLASSIFICATION</p> <p>This classification has been carried out in accordance with clause 11 of EN 13501-1:2007+A1:2009.</p> <p>4.2. CLASSIFICATION</p> <p>The product: Moso Bamboo X-Treme Cladding, in relation to its reaction to fire behaviour is classified:</p> <p>The additional classification in relation to smoke production is:</p> <p>Reaction to fire classification: B - s1, d0</p>

fire resistance

EN 13501-1

decking

class Bfl-s1

cladding, fencing, beams

class B-s1-d0

Classification ASTM E84

Classification	Flame Spread Index	Smoke Developed Index
A	0 - 25	0 - 450
B	26 - 75	0 - 450
C	76 - 200	0 - 450

reaction to fire

(FSI 25 / SDI 45)

ASTM E84

class A

WUI approved

CAN/ULC-S102

Carbon Footprint (CO₂eq) per kg final product

PRODUCTION	END OF LIFE	CO ₂	CO ₂	CO ₂
CO ₂ footprint	CO ₂ credit	Storage	Total	Neutral
CO ₂ eq/kg	CO ₂ eq/kg	CO ₂ eq/kg	CO ₂ eq/kg	Y / N
1.193	-0.704	-0.607	-0.118	Yes

Eco-costs (€) per kg final product

PRODUCTION	END OF LIFE	ECO-COSTS	ECO-COSTS
Eco-costs	Eco-costs	CO ₂ storage	Total
Euro/kg	Euro/kg	Euro/kg	Euro/kg
0.356	-0.132	-0.082	0.142

carbon footprint

ISO 14040/44

CO₂ neutral



The life cycle and the carbon footprint of MOSO products are evaluated according to ISO 14040/44. For more information: www.moso.eu/lca. The full report is available on request.

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Author:
Dr. Vogtlander J.G. (2014). Life Cycle Assessment and Carbon Sequestration - Update 2014 - Bamboo products of Moso International. Associate professor - Design for Sustainability - Delft University of Technology.