

ICC-ES Evaluation Report

ESR-3756

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DIVISION: 06 00 00—WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 73.13—Fire-Retardant Wood Treatment
Section: 06 15 33—Wood Patio Decking

REPORT HOLDER:

KEBONY AS

EVALUATION SUBJECT:

KEBONY DECK BOARDS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Preservative-treated wood
- Decay resistance
- Structural

2.0 USES

Kebony deck boards are used for wood deck board members where such members are required by the code to be protected or resistant to decay.

3.0 DESCRIPTION

3.1 General:

Kebony deck boards are sawn lumber that have been modified by a proprietary process to make the boards resistant to decay for exterior above-ground use. The deck boards are available in the dimensions and profiles show in Figure 1.

3.2 Material:

Kebony Clear SYP and Kebony Clear RAP deck boards are made from Southern Yellow and Radiata pine lumber, respectively, modified in accordance with the approved proprietary quality documentation to make the lumber resistant to decay. The boards are manufactured in nominal 1 in. by 6 in. and 2 in. by 6 in. dimensions, with lengths 8 to 16 feet (2.4 to 4.8 m) and have the unit weights in Footnote 3 of Table 1.

4.0 DESIGN AND INSTALLATION

4.1 Design:

Specification of Kebony deck boards must be in accordance with the allowable loads and spans provided in Table 1, subject to the footnotes in Table 1, and in accordance with the applicable code.

4.2 Installation:

Kebony Deck Boards may be installed transversely or diagonally across supporting framing. Each board end and intermediate support locations must be supported by framing members in two-span or continuous span layups. Kebony Deck Boards used as stair treads must be supported by at least one intermediate stringer. Each board must be fastened at each end and support member crossing with two No. 8 stainless steel screws according to Kebony installation instructions.

5.0 CONDITIONS OF USE

The Kebony deck boards described in this report comply with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Kebony deck boards have been evaluated for exterior above-ground use. Kebony deck boards have not been evaluated for resistance to termites.
- 5.2** Fasteners and hardware in contact with Kebony deck boards must be of stainless steel.
- 5.3** Adjustment factors provided in the *ANSI/AWC National Design Specification*® for Wood Construction (NDS) and *Supplement* are not applicable to Kebony deck boards and may not be applied to the maximum spans and design loads in this report.
- 5.4** Maximum loads and spans in this report are applicable only to boards supported at ends and one or more intermediate locations (two or more continuous spans).
- 5.5** Maximum loads and spans for Kebony deck boards used as stair treads are applicable only to boards supported at ends and one or more intermediate locations (two or more continuous spans).
- 5.6** Kebony deck boards are manufactured at Skien, Norway under a quality control program with inspections by ICC-ES and RISE Research Institutes of Sweden AB.

6.0 EVIDENCE SUBMITTED

- 6.1 Test data in accordance with ICC-ES Acceptance Criteria for Structural Wood-based Products (AC47), Approved June 2017.
- 6.2 Test data in accordance with ICC-ES Acceptance Criteria for Wood Preservative Systems—Common Requirements for Treatment Process, Test Methods and Performance (AC326), Approved October 2015.

7.0 IDENTIFICATION

- 7.1 Kebony Deck Boards shall be identified with a stamp or label containing the manufacturer name, manufacturing location, trade name (Kebony), species (SYP or RAP), manufacturing date, inspection agency (ICC-ES and RISE Research Institutes of Sweden

AB), ESR-3756, and the following: Exterior – above ground, deck use only; not suitable for exposure to termites.

- 7.2 The report holder’s contact information is the following:

KEBONY AS
HOFFSVEIEN 48
OSLO / N-0377
NORWAY
+47 06125
www.kebony.com
info@kebony.com

TABLE 1—KEBONY DECK BOARDS LOADS AND SPANS^{3,6}

PRODUCT DESCRIPTION	JOIST SPACING (in.)	ALLOWABLE UNIFORM LOAD ^{1,4}		ALLOWABLE STAIR TREAD LOAD ^{2,5} (lbf)
		Deck board at 90° to joists (psf)	Deck board at 45° to joists (psf)	
Southern Yellow Pine				
Kebony Clear SYP 22 mm	12	250	200	300
Kebony Clear SYP 22 mm	16	200	150	300
Kebony Clear SYP 22 mm	24	150	100	300
Kebony Clear SYP 38 mm	16	250	200	300
Kebony Clear SYP 38 mm	24	200	150	300
Kebony Clear SYP 38 mm	36	150	- ⁷	300
Radiata Pine				
Kebony Clear RAP 22 mm	12	250	200	300
Kebony Clear RAP 22 mm	16	200	150	300
Kebony Clear RAP 22 mm	24	150	100	300
Kebony Clear RAP 38 mm	16	250	200	300
Kebony Clear RAP 38 mm	24	200	150	300
Kebony Clear RAP 38 mm	36	150	- ⁷	300

SI Units conversion: 1 in. = 25.4 mm; 1 psf = 0.0479 kN/m²; 1 lbf = 0.004448 kN.

Footnotes:

- ¹ Tabulated deck board loads are for uniform live loads applied to boards spanning continuously over two or more equally spaced joists.
- ² Tabulated stair tread loads are for treads spanning continuously over two or more equally spaced stringers.
- ³ The spans indicated above take into consideration the loads tabulated in addition to the weight of the deck boards themselves. The weights of the Kebony deck boards are as follows: SYP 22mm 3.4 psf (0.16 kN/m²); SYP 38mm 4.7 psf (0.22 kN/m²); RAP 22mm 3.0 psf (0.14 kN/m²); RAP 38mm 3.9 psf (0.19 kN/m²).
- ⁴ Deflection limit for uniform load = span / 360.
- ⁵ Deflection limit for stair treads = 0.125 in. (3.2 mm).
- ⁶ No increases in tabulated loads allowed.
- ⁷ Not applicable at 45° to this joist spacing.











Profiles			
Kebony Clear SYP		Kebony Clear RAP	
Item 2102		7/8" (22 mm)	Item 2226
	5 5/8" (142 mm)		
Item 2101		7/8" (22 mm)	Item 2131
	5 5/8" (142 mm)		
Item 2104		7/8" (22 mm)	Item 2361
	5 5/8" (142 mm)		
Item 2103		7/8" (22 mm)	Item 2313
	5 5/8" (142 mm)		
Item 1462		1 1/2" (38 mm)	Item 2522
	5 1/2" (140 mm)		

FIGURE 1—KEBONY DECK BOARD PROFILES