

ICC-ES Evaluation Report



ESR-3756

Reissued August 2022 Revised December 2022 This report is subject to renewal August 2023.

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DIVISION: 06 00 00—WOOD, PLASTICS, AND

COMPOSITES

Section: 06 05 73.33—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:

- 2021, 2018, 2015, 2012 and 2009 International Building Code[®] (IBC)
- 2021, 2018, 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 pine 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 have been evaluated using No. 8 stainless steel screws installed at each end and support member crossing. Alternate methods of attaching Kebony deck boards to supporting framing are outside the scope of this report.



5.7 Kebony deck boards are manufactured at Skien, Norway and Kallo, Belgium 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 (editorially revised February 2021).
- 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 2021.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3756) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

- 7.2 In Addition, 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), and the following: Exterior above ground, deck use only; not suitable for exposure to termites.
- **7.3** The report holder's contact information is the following:

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

PRODUCT DESCRIPTION	JOIST SPACING (in.)	ALLOWABLE UNIFORM LOAD 1,4		ALLOWABLE
		Deck board at 90° to joists (psf)	Deck board at 45° to joists (psf)	STAIR TREAD LOAD ^{2,5} (lb _f)
	Southe	rn Yellow Pine	1	
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
	Rad	diata 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/m^2 ; 1 lb_f = 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.

⁴ Deflection limit for uniform load = span / 360.

⁶ No increases in tabulated loads allowed.

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).

⁵ Deflection limit for stair treads = 0.125 in. (3.2 mm).

⁷ Not applicable at 45° to this joist spacing.

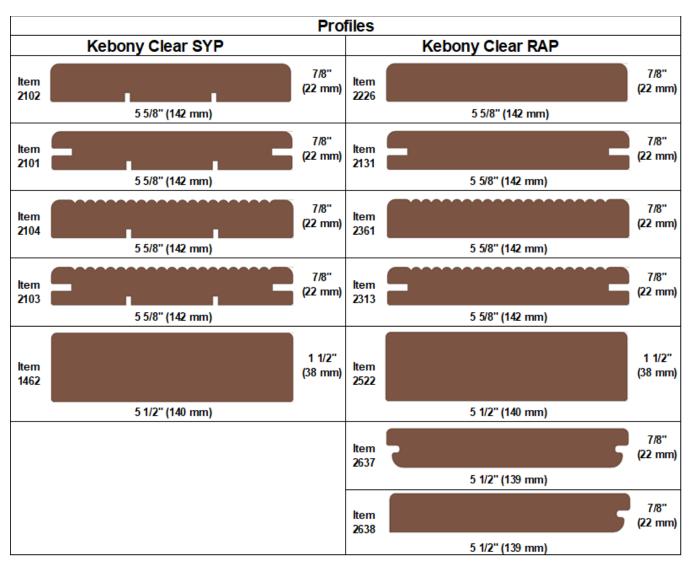


FIGURE 1 - KEBONY DECK BOARD PROFILES