## **TECHNICAL FILE TWINSON**

application: P9360

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version: v10

|                                 |                          |   | EN 15534-1 | based on         | specific property  | unit   | value              |
|---------------------------------|--------------------------|---|------------|------------------|--|--|--------------------|
| MATERIAL CHARACTERISTICS        | physical<br>properties   | density   | § 6.2      | ISO 1183-1/A     |  | kg/dm³   | 1.44 ± 0.05        |
|                                 | mechanical properties    | flexural properties   | § 7.3.1    | ISO 178          | flexural modulus<br>bending strength                         | MPa<br>MPa                                       | 6300 ± 10%<br>> 55 |
|                                 | durability               | swelling and waterabsorption<br>(28 days)                       | § 8.3.1    | EN 317           | mass increase  | %  | < 8                |
|                                 |                          | resistance to termites  | § 8.4      | EN 117           |  | class  | 1                  |
|                                 |                          | resistance against<br>basidiomycetes                            | § 8.5.2    | ENV 12038        |  | class  | 1                  |
|                                 |                          | resistance against soil inhabiting soft rotting micro-<br>fungi | § 8.5.3    | CEN/TS 15083-2   |  | class  | 1                  |
|                                 | thermal properties       | linear thermal expansion<br>(-20 °C +60°C)                      | § 9.2      | ISO 11359-2      | length direction   | 10 <sup>-6</sup> m <sup>-1</sup> K <sup>-1</sup> | 20 - 25            |
|                                 | burning<br>behaviour     | oxygen index  | § 9.5      | ISO 4589-2       |  | %  | > 20               |
| PRODUCT RELATED CHARACTERISTICS | physical<br>properties   | slip resistance   | § 6.4.3    | DIN 51097        | bare foot ramp test  | class  | С                  |
|                                 |                          |   |            | EN 16165 annex B | shod ramp test; riffled<br>surface<br>(lengthwise/crosswise) | class  | R12                |
|                                 |                          |   |            | EN 16165 annex B | shod ramp test; wood<br>surface<br>(lengthwise/crosswise)    | class  | R13/R12            |
|                                 |                          |   | § 6.4.2    | CEN/TS 15676     | pendulum (wet) - riffled<br>surface; lengthwise              | class  | 62                 |
|                                 |                          |   | § 6.4.2    | CEN/TS 15676     | pendulum (wet) - wood<br>surface; lengthwise                 | class  | 64                 |
|                                 | mechanical<br>properties | flexural properties   | 8732       | EN 310           | flexural modulus   | MPa  | 6000 ± 10%         |
|                                 |                          | (Lv=40 cm)  | 3          |                  | bending strength   | MPa  | > 45               |
|                                 |                          | creep behaviour<br>(Lv=40 cm/85kg/50°C/<br>7 days)              | § 7.4.1    | EN 310           | additional bending   | mm   | < 10               |
|                                 | durability               | natural weathering<br>(1 year Bandol)                           |            |                  | bending strength<br>retention                                | %  | < 20               |
|                                 |                          | cyclic conditions<br>(Lv=40 cm)                                 | § 8.3.2    | EN 321           | bending strength<br>retention                                | %  | < 20               |
|                                 |                          | boiling test  | § 8.3.3    | ISO 1087-1       | mass increase  | %  | < 4                |
|                                 | thermal                  | heat reversion  | § 9.3      | EN 479           |  | %  | < 0.2              |
|                                 | properties               | heat build-up   | § 9.4      | ASTM D4803       |  | °C   | < 45               |
|                                 | burning<br>behaviour     | single flame source   | § 9.6.1    | ISO 11925-2      | classification EN 13501-1                                    | class  | OK                 |
|                                 |                          | radiant heat source   | § 9.6.3    | ISO 9239-1       | classification EN 13501-1                                    | class  | Bfl s1             |
|                                 |                          | roofs/roof coverings exposed to external fire                   |            | CEN/TS 1187      | classification EN 13501-5                                    | class  | Broof (t1)         |

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