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DoP ref: **NP5Strebord\_UKCA\_DoPv1**

EN13986:2004 +A1:2015

1224

21

E1

P5

38mm T&G

Structural use in humid conditions

| Essential characteristics  | Performance                          |
|--|--------------------------------------|
|  | <b>Thickness(mm)</b>                 |
|  | <b>38mm T&amp;G at 600mm Centres</b> |
| <sup>1</sup> Characteristic Strength (N/mm <sup>2</sup> )  |                                      |
| - Bending $f_m$  | 8.3                                  |
| - Compression $f_c$  | 8.5                                  |
| - Tension $f_t$  | 5.6                                  |
| - Panel Shear $f_v$  | 4.8                                  |
| - Planar shear $f_r$   | 1.2                                  |
| <sup>1</sup> Mean Stiffness (MOE) (N/mm <sup>2</sup> )   |                                      |
| - Tension $E_t$  | 1400                                 |
| - Compression $E_c$  | 1400                                 |
| - Bending $E_m$  | 2400                                 |
| - Panel Shear $G_v$  | 690                                  |
| <b>Punching Shear Characteristic strength under point load <math>F_{max, k}</math> (kN)</b><br><i>(for floors and roofs)</i> | 12.54                                |
| <b>Punching Shear Mean stiffness under point load, <math>R_{mean}</math> (N/mm)</b><br><i>(for floors and roofs)</i>         | 1960                                 |
| <b>Racking resistance (for walls)</b><br><b>Characteristic Strength <math>F_{Rd, max, k}</math> (N)</b>                      | NPD                                  |
| <b>Racking resistance (for walls)</b><br><b>Mean Stiffness <math>R_{mean}</math> (N/mm)</b>                                  | NPD                                  |
| <b>Soft Body Impact resistance</b><br><b>Floor/roofs</b><br><b>Walls.</b>  | Impact Class 1, Pass, Floor          |
| <b>Embedment Strength <math>f_h</math> (N/mm<sup>2</sup>)</b>  | NPD                                  |

| <sup>2</sup> Reaction to fire<br><br>(see notes to table for field of application details and associated documentation references)   |   | Minimum thickness | Class (excluding floorings) <sup>g</sup> | Class (Flooring) <sup>h</sup> |
|--|---|-------------------|--|-------------------------------|
|  | <b>Without an air gap behind the panel</b> <sup>abef</sup>                  | 9                 | D-s2,d0                                  | C <sub>fi</sub> ,s1           |
|  | <b>With a closed or open air gap ≤ 22mm behind the panel</b> <sup>cef</sup> | 9                 | D-s2,d2                                  | -                             |
|  | <b>Closed air gap behind the panel</b> <sup>def</sup>                       | 15                | D-s2,d0                                  | C <sub>fi</sub> ,s1           |
|  | <b>With an open air gap behind the panel</b> <sup>def</sup>                 | 18                | D-s2,d0                                  | C <sub>fi</sub> ,s1           |
|  | <b>Any end use</b> <sup>ef</sup>  | 3                 | E  | E <sub>fl</sub>               |
| a -Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m <sup>3</sup> or at least class D-s2, d2 products with minimum density 400 kg/m <sup>3</sup> .<br>b -A substrate of cellulose insulation material of at least class E may be included if mounted directly against the wood-based panel, but not for floorings.<br>c -Mounted with an air gap behind. The reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 10 kg/m <sup>3</sup> .<br>d -Mounted with an air gap behind. The reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m <sup>3</sup> .<br>e -Veneered, phenol- and melamine-faced panels are included for class excl. floorings.<br>f -A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m <sup>2</sup> can be mounted in between the wood-based panel and a substrate if there are no air gaps in between.<br>g -Class Provided for in Table 1 of the Annex to decision 2000/147/EC<br>h -Class Provided for in Table 2 of the Annex to decision 2000/147/EC |   |                   |  |                               |

| Essential characteristics   | Performance       |           |             |            |               |
|---|-------------------|-----------|-------------|------------|---------------|
| Water vapour permeability $\mu$   | NPD               |           |             |            |               |
| Release of formaldehyde   | E1                |           |             |            |               |
| Release (content) of pentachlorophenol (PCP)                                | ≤5ppm             |           |             |            |               |
| Airborne sound insulation (surface mass) R (dB)                             | NPD               |           |             |            |               |
| <sup>3</sup> Sound absorption Frequency range 250Hz to 500Hz ( $\alpha$ )   | 0.1               |           |             |            |               |
| <sup>3</sup> Sound absorption Frequency range 1000Hz to 2000Hz ( $\alpha$ ) | 0.25              |           |             |            |               |
| Thermal conductivity $\lambda$ (W/m.K)                                      | NPD               |           |             |            |               |
| Air Permeability $V_0$ (m <sup>3</sup> /h)                                  | NPD               |           |             |            |               |
| Durability  |                   |           |             |            |               |
| Internal bond (N/mm <sup>2</sup> )  | 0.30              |           |             |            |               |
| Swelling in thickness (%)   | 9                 |           |             |            |               |
| Internal bond after cyclic test (N/mm <sup>2</sup> )                        | 0.15              |           |             |            |               |
| Swelling in thickness after cyclic test (%)                                 | 9                 |           |             |            |               |
| <sup>4</sup> Mechanical (creep $k_{def}$ )<br>Service class 1               | 2.25              |           |             |            |               |
| <sup>4</sup> Mechanical (creep $k_{def}$ )<br>Service class 2               | 3                 |           |             |            |               |
| Mechanical (duration of load $k_{mod}$ )                                    | Action Mode       |           |             |            |               |
|   | Permanent         | Long Term | Medium Term | Short Term | Instantaneous |
| Service Class 1   | 0.30              | 0.45      | 0.65        | 0.85       | 1.1           |
| Service Class 2   | 0.20              | 0.30      | 0.45        | 0.60       | 0.80          |
| Biological  | Use classes 1 & 2 |           |             |            |               |

## NOTES TO TABLE

1 Taken from EN 12369-1:2001

2 reaction to fire classes from Table 1 of Commission Decision 2003/43/EC of January 2003 (OJEU L13 of 18.1.2003) corrected by Corrigendum (OJEU L33 of 8.2.2003) and amended by Commission decision 2007/348/EC of May 2007 (OJEU L131 of 23-05-2007); also reproduced in Table three of EN 13986:2004+A1:2015 for wood-based panels installed according to CEN/TR 12872

3 Taken from Table 10 of EN 13986:2004+A1:2015

4 Taken from Eurocode 5 EN 1995-1-1 2004+A2:2014