



#### RAW CHIPBOARD

| Standard number | Title                                         | Date of issue |
|-----------------|-----------------------------------------------|---------------|
| EN 309          | Particleboards. Definition and classification | June 2006     |
| EN 312          | Particleboards. Specifications                | June 2011     |

| Technical specification                                  | Test methods | Units                  | Requirements<br>EN 312:2011     |          |          |          |          |
|----------------------------------------------------------|--------------|------------------------|---------------------------------|----------|----------|----------|----------|
|                                                          |              |                        | Thickness range (nominal in mm) |          |          |          |          |
|                                                          |              |                        | >6 - 13                         | >13 - 20 | >20 - 25 | >25 - 32 | >32 - 40 |
| Density                                                  | EN 323       | [Kg / m <sup>3</sup> ] | 730 ± 5%                        | 690 ± 5% | 670 ± 5% | 660 ± 5% | 640 ± 5% |
| Thickness on nominal dimensions                          | EN 324-1     | [mm]                   | ± 0,3                           |          |          |          |          |
| Length and width (commercially available size)           | EN 324-1     | [mm]                   | ± 5                             |          |          |          |          |
| Edge straightness tolerance                              | EN 324-2     | [mm/m]                 | ≤ 1,5                           |          |          |          |          |
| Moisture content                                         | EN 322       | %                      | 5-13                            |          |          |          |          |
| Modulus of elasticity in bending (M.O.E)                 | EN 310       | [N/mm <sup>2</sup> ]   | 2050                            | 1950     | 1850     | 1700     | 1550     |
| Bending strength (M.O.R)                                 | EN 310       | [N/mm <sup>2</sup> ]   | 15                              | 14       | 12       | 11       | 9        |
| Tensile strength perpendicular to the plane of the board | EN 319       | [N/mm <sup>2</sup> ]   | 0,45                            | 0,45     | 0,4      | 0,35     | 0,3      |
| Surface soundness                                        | EN 311       | [N/mm <sup>2</sup> ]   | 0,8                             | 0,8      | 0,8      | 0,8      | 0,8      |
| Swelling, 24h                                            | EN 317       | %                      | 17                              | 14       | 13       | 13       | 12       |
| Internal bond after boil test                            | EN 1087-1    | [N/mm <sup>2</sup> ]   | 0,09                            | 0,08     | 0,07     | 0,07     | 0,06     |
| Fire reaction class**                                    | EN 13986     | [class]                | D-s2,d0                         |          |          |          |          |
| Formaldehyde release*                                    | EN 717-1     | [class]                | E1, CARB2, TSCA Title VI, UBA   |          |          |          |          |

\* The product complies with :

» **E1** emission class as **standard product**. ( EN 12460-5) Perforator value: ≤8mg/100g dry board.

» **CARB Phase 2 (special order)** - (ASTM D6007-02) Final Regulation Order of "Airborne Toxic Control Measure to Reduce Formaldehyde Emission from Composite Wood Products", 93120- 93120.12, title 17, California Code of Regulations, §93120.2 (a), emission standards, according to table 1: "Phase 1 and Phase 2 formaldehyde emission standards for hardwood plywood (HWPW), particleboard (PB) and medium density fibreboard (MDF)" . Emission standards value for particleboard Phase 2 ≤ 0,09 ppm.

» **TSCA Title VI (special order)** - (ASTM D6007-02) Formaldehyde limit values for composite wood products according to the final rule "Formaldehyde Emission Standards for Composite Wood Products" which added Title VI to the Toxic Substances Control Act (TSCA) – 'TSCA Title VI' - Final rule 40 CFR Part 770 - published by the US Environmental Protection Agency (EPA) in the Federal Register, the Daily Journal of the United States Government. Emission standards value for particleboard ≤ 0,09 ppm.

» **UBA (special order)** - (EN 717-1) Regulation issued by the German Federal Ministry published in the German Official Gazette (BAnz AT 26/11/2018 B2) Standard emission values for particle board (PB) ≤ 0.05 ppm

\*\* Classification without the need for further tests (CWFT), as indicated in table 8<sup>5)</sup>, if the panel satisfies the characteristics and conditions of final use specified therein.