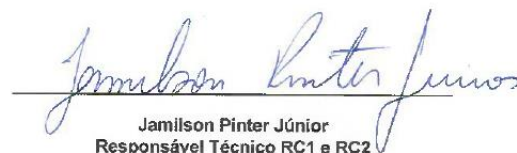


# Certificate of Technical Specifications

PRODUCT: GDN CARVALHO HD HARD  
 FORMAT: 291,0X584MM,0X10 MM CONTAINS: 2 Pieces 0,34 m2 3,66 SQFT GROUP: Bla

| Technical Characteristics                        | ISO       | Req.             | Unit  | Specification |
|--|-----------|------------------|-------|---------------|
| DIM. VAR. IN REL. W. OF THE GREATER SIDE         | 10545-2   | ±1.0             | mm    | ±1.0          |
| DIM. VAR. IN REL. W. OF THE MINOR SIDE           | 10545-2   | ±0.87            | mm    | ±0.87         |
| THICKNESS VARIATION                              | 10545-2   | ±0.50            | mm    | ±0.50         |
| STRAIGHTNESS OF THE GREATER SIDE                 | 10545-2   | ±0.80            | mm    | ±0.80         |
| STRAIGHTNESS OF THE MINOR SIDE                   | 10545-2   | ±0.80            | mm    | ±0.80         |
| DEVIATION FROM ORTHOGONALITY OF THE GREATER SIDE | 10545-2   | ±1.50            | mm    | ±1.50         |
| DEVIATION FROM ORTHOGONALITY OF THE MINOR SIDE   | 10545-2   | ±0.87            | mm    | ±0.87         |
| CENTRAL DIAGONAL CURVATURE DEVIATION             | 10545-2   | ±1.80            | mm    | ±1.80         |
| DEVIATION OF THE CURVATURE OF THE SIDES          | 10545-2   | ±1.80            | mm    | ±1.80         |
| DEVIATION OF THE CURVATURE OF THE SIDES          | 10545-2   | ±1.16            | mm    | ±1.16         |
| BENDING OVER DIAGONAL                            | 10545-2   | ±1.80            | mm    | ±1.80         |
| QUALITY OF SURFACE                               | 10545-2   | ≥95              | %     | ≥95           |
| WATER ABSORPTION                                 | 10545-3   | ≤0.5             | %     | ≤0.5          |
| RESISTANCE TO BENDING                            | 10545-4   | ≥35              | N/mm2 | ≥35           |
| BREAKING STRENGTH                                | 10545-4   | ≥1300            | N     | ≥1300         |
| CLASS OF USAGE                                   | 10545-7   | Specify          | Use   | 6             |
| THERMAL SHOCK RESISTANCE                         | 10545-9   | -                | -     | -             |
| LINEAR EXPANSION COEFFICIENT X 10-6              | 10545-8   | -                | °C-1  | -             |
| MOISTURE EXPANSION                               | 10545-10  | -                | mm/m  | ≤0.30         |
| GRAZING RESISTANCE                               | 10545-11  | -                | -     | OK            |
| RESISTANCE TO CHEMICALS                          | 10545-13  | Minimum Class GB | -     | GA            |
| RESISTANCE ATTACKS ACID/ALKALINE                 | 10545-13  | Specify          | -     | GLB           |
| SURFACE RESISTANCE TO STAINS                     | 10545-14  | Minimum Class 3  | -     | 4             |
| COEFFICIENT OF FRICTION WET                      | NBR 16919 | Specify          |       | ≥0.5          |
| CHANGES IN HUE                                   |           |                  |       | V3            |

Note: Product in accordance with ABNT NBR 13006 standard  
 Reaction to fire evaluation (NBR15575): Class I (non-combustible)  
 USE 6 – All residential and commercial areas with intense traffic.

  
 Jamilson Pinter Júnior  
 Responsável Técnico RC1 e RC2

  
 Galdino da Luz  
 Responsável Técnico RC3 e RC4