

## Technical Data Sheet DIBOND®

| Panel thickness :                       |                |           | 2 mm                                       | 3 mm   | 4 mm   | 6 mm   |
|-----------------------------------------|----------------|-----------|--------------------------------------------|--------|--------|--------|
| Thickness of Aluminium Layers           | [mm]           |           | 0.30                                       |        |        |        |
| Weight                                  | [kg/m²]        |           | 2.90                                       | 3.80   | 4.75   | 6,60   |
| <b>Technical Properties :</b>           |                |           |                                            |        |        |        |
| Section Modulus                         | W              | [cm³/m]   | 0.51                                       | 0.81   | 1.11   | 1.71   |
| Rigidity (Poisson's ratio $\mu = 0.3$ ) | E·I            | [kNcm²/m] | 345                                        | 865    | 1620   | 3840   |
| Alloy of Aluminium Layers               |                |           | AlMg 1 (EN AW-5005), H44                   |        |        |        |
| Modulus of Elasticity                   |                | [N/mm²]   | 70'000                                     |        |        |        |
| Tensile Strength of Aluminium           |                | [N/mm²]   | R <sub>m</sub> 145 - 185                   |        |        |        |
| 0.2% Proof Stress                       |                | [N/mm²]   | R <sub>p0.2</sub> 110 – 175                |        |        |        |
| Elongation                              |                | [%]       | A <sub>50</sub> ≥ 3                        |        |        |        |
| Linear Thermal Expansion                |                |           | 2.4 mm / m at 100°C temperature difference |        |        |        |
| <b>Core :</b>                           |                |           |                                            |        |        |        |
| Polyethylene, Typ LDPE                  |                | [g/cm³]   | 0.92                                       |        |        |        |
| <b>Surface :</b>                        |                |           |                                            |        |        |        |
| Lacquering                              |                |           | Coil Coating                               |        |        |        |
|                                         |                |           | Mod. Polyester-System                      |        |        |        |
| Gloss ( initial value )                 |                |           | 30 - 60 %                                  |        |        |        |
| Pencil Hardness                         |                |           | HB - F                                     |        |        |        |
| <b>Acoustical Properties :</b>          |                |           |                                            |        |        |        |
| Sound Absorption Factor                 | $\alpha_s$     |           | 0.05                                       |        |        |        |
| Sound Transmission Loss                 | R <sub>w</sub> | [dB]      | 23                                         | 24     | 25     | 26     |
| Loss Factor                             | d              |           | 0.0048                                     | 0.0057 | 0.0072 | 0,0102 |
| <b>Thermal Properties :</b>             |                |           |                                            |        |        |        |
| Thermal Resistance                      | R              | [m²K/W]   | 0.0047                                     | 0.0080 | 0.0113 | 0,0180 |
| Heat Transition Coefficient             | U              | [W/m²K]   | 5.72                                       | 5.61   | 5.50   | 5,30   |
| Range of Application                    |                | [°C]      | -50...+80                                  |        |        |        |