

MATERIAL PROPERTY DATASHEET

**COMPACT | FIRE RETARDANT**

Manufactured in Spain



Decorative high-pressure compact laminates according to EN 438-4 thicknesses 2 mm and greater for interior surface solutions. Sheets consisting of layers of wood-based fibres (paper and / or wood) impregnated with thermosetting resins and surface layer (s) on one or both sides, having decorative colours or designs. These components are bonded together with simultaneous application of heat and high specific pressure to obtain a homogeneous non-porous material with increased density and integral decorative surface. The laminates below 4mm are normally intended for bonding by the composite manufacturers to supporting substrate in order to produce finished panels.

|  |               | Type                                    | Standard   |   |
|--|---------------|---|--|---|
|  |               | EN438 Classification                    | CGF  | High Gloss (AR Plus™) CGF   |
|  |               | Standard                                | Standard: EN438-4                                |   |
|  |               | Applicability:                          | Decors/Surface finish: All on offer              |   |
| Properties                                     | Test method   | Property or attribute                   | Unit   | Requirements  |
| <b>SURFACE QUALITY</b>                         |               |   |  |   |
| Surface Quality                                | EN438-2: 4    | Spots, dirt, similar surface defects    | mm <sup>2</sup> /m <sup>2</sup>                  | ≤ 1   |
|  |               | Fibres, hairs & scratches               | mm/m <sup>2</sup>                                | ≤ 10  |
| <b>DIMENSIONAL TOLERANCES</b>                  |               |   |  |   |
| Dimensional Tolerances                         | EN438-2: 5    | Thickness                               | mm   | ±0,20 for thickness 2,0 ≤ t < 3,0<br>±0,30 for thickness 3,0 ≤ t < 5,0<br>±0,40 for thickness 5,0 ≤ t < 8,0<br>±0,50 for thickness 8,0 ≤ t < 12,0<br>±0,60 for thickness 12,0 ≤ t < 16,0<br>±0,70 for thickness 16,0 ≤ t < 20,0 |
|  | EN438-2: 6    | Length & Width                          | mm   | +10 mm/ -0mm  |
|  | EN438-2: 8    | Squareness                              | mm   | ≤ 1,5   |
|  | EN438-2: 7    | Edge Straightness                       | mm/m   | ≤ 1,5   |
|  | EN438-2: 9    | Flatness<br>Measured on full size sheet | mm/m   | ≤ 8,0 for thickness 2,0 ≤ t < 6,0mm<br>≤ 5,0 for thickness 6,0 ≤ t < 10,0mm<br>≤ 3,0 for thickness 10,0 ≤ t   |
| <b>PHYSICAL PROPERTIES</b>                     |               |   |  |   |
| Surface Wear Resistance                        | EN438-2: 10   | Initial point                           | Revolutions                                      | ≥150  |
| Immersion in Boiling Water                     | EN438-2: 12   | Rating<br>Gloss<br>Other                | Appearance<br>Edge Rating                        | ≥3<br>≥4<br>≥3  |
|  |               | Mass Increase (% max)                   | 2,0 ≤ t < 5,0mm<br>t ≥ 5,0mm                     | ≤7<br>≤3  |
|  |               | Thickness Increase (% max)              | 2,0 ≤ t < 5,0mm<br>t ≥ 5,0mm                     | ≤9<br>≤6  |
|  |               | Resistance to Water Vapour              | EN438-2: 14                                      | Gloss<br>Other  |
| Resistance to Dry Heat (160°C)                 | EN438-2: 16   | Gloss<br>Other                          | Rating of Appearance                             | ≥3<br>≥4  |
| Dimensional Stability at Elevated Temperatures | EN438-2: 17   | Cumulative dimensional changes          | Longitudinal (%)<br>2,0 ≤ t < 5,0mm<br>t ≥ 5,0mm | ≤0,4<br>≤0,3  |
|  |               |   | Transversal (%)<br>2,0 ≤ t < 5,0mm<br>t ≥ 5,0mm  | ≤0,8<br>≤0,6  |
| Resistance to Wet Heat (100°C)                 | EN438-2: 18   | Gloss<br>Other                          | Rating of Appearance                             | ≥3<br>≥4  |
| Resistance to Impact by Large diameter ball    | EN438-2: 21   | Drop height                             | mm<br>2,0 ≤ t < 6,0<br>6,0 ≤ t                   | 1400<br>1800  |
| Scratch Resistance                             | EN438-2: 25   | Force<br>Smooth<br>Texture              | Rating of Appearance                             | ≥2<br>≥3  |
| Stain Resistance                               | EN438-2: 26   | Groups 1 and 2<br>Group 3               | Rating of Appearance                             | ≥4<br>≥4  |
| Light Fastness                                 | EN438-2: 27   | Grey Scale Rating                       | Contrast   | ≥4  |
| Modules of elasticity                          | EN ISO 187    | Stress                                  | MPa  | ≥9000   |
| Flexural Strength                              | EN ISO 187    | Stress                                  | MPa  | ≥80   |
| Density  | EN ISO 1183-1 | Density                                 | g/cm <sup>3</sup>                                | ≥ 1,35  |
| <b>OTHER PROPERTIES</b>                        |               |   |  |   |
| Release of Formaldehyde                        | EN 717-2      | Classification                          | Class  | E1  |

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| FIRE BEHAVIOUR   |           |                                |       |  |
|--|-----------|--------------------------------|-------|--|
| Reaction to Fire   | EN13501-1 | 2,0 ≤ t < 4,0mm                | Class | The reaction to fire of Formica semi-finished 2,0 ≤ t < 4,0mm is related to the final composite panel where the laminate is bonded to a substrate. Since the test results also depend on the substrate, the adhesive and the bonding techniques applied, the composite manufacturer is responsible for the correct execution of the test in accordance with the applicable standards and test methods required for the specific application field. |
|  |           | 4,0 ≤ t < 6,0mm<br>metal frame | Class | B-s2,d0  |
|  |           | 6,0mm ≤ t                      | Class | B-s1,d0  |
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