

## SURFORMA® LAMINATES

Decorative HPL Standard, Post-Forming and Fire Retardant for interior applications

### DESCRIPTION

SURFORMA® decorative laminates, according to EN 438, are an excellent material for indoor surfaces, either horizontal or vertical. SURFORMA® decorative laminates meet the stringent requirements for hygiene, fire resistance, humidity resistance and mechanical properties.

**The laminate surface is ANTIBACTERIAL, tested according to ISO 22196 and validated accordingly to Japanese regulation JIS Z 2801.**

**HPL are cured and therefore chemically inert. Laminates surfaces are physiologically safe and approved for use in direct contact with foodstuff.**

SURFORMA® decorative laminates are available in a variety of colors, patterns and surface textures, providing extensive options for architects and designers.

Please check offer & service brochure for information on sizes and thicknesses available.

### APPLICATIONS

Decorative laminates are meant to be used in interior applications either horizontal or vertical where design, appearance, quality, durability, resistance to abrasion, scratches, stains and resistance to heat from ordinary sources are important features.

SURFORMA® laminates are the best choice for residential, public and commercial areas, and healthcare applications.

### PROPERTIES



LOW  
EMISSIONS



ANTI-STATIC



ABRASION  
RESISTANT



SCRATCH  
RESISTANT



STAIN  
RESISTANT



LIGHT  
RESISTANT



EASY TO CLEAN



DIMENSIONAL  
STABILITY



EASY TO MILL



FIRE  
RETARDANT



POSTFORMABLE

### RECOMMENDATIONS

**The advice and recommendations are of advisory nature only**

#### Handling & Storage

Laminates should be stored so they are protected from moisture, humidity and direct sunlight. The laminates should preferably be stored face-to-face, flat in horizontal racks. When handling or moving decorative laminates it is important that the sheets be lifted above adjacent sheets to avoid damage that can occur if the sheets are pulled or slid against each other. For larger sizes, it is recommended that sheets be carried arched along the longitudinal axis to prevent sagging. Individual sheets can also be rolled up for easier handling (roll with the decorative side to the inside, making sure to avoid any side-to-side sliding motions).

#### Maintenance & Cleaning

SURFORMA® laminates, with their durable, hygienic and waterproof surface, require no special maintenance. Their surface can be cleaned with warm water followed by wiping with a paper towel or soft cloth. Persistent contamination can usually be eliminated with non-abrasive household cleaners. They are resistant to most solvents and chemicals used daily at home.

#### Transportation, Recovery and Disposal

In terms of transport regulations, HPL is not classified as a hazardous material; therefore, labelling is not necessary. Laminates are an article and not a chemical substance and therefore the REACH regulation does not apply. Due to their high calorific value (18-20 MJ/kg) HPL are suitable for thermal recycling.

Laminates can be brought to controlled waste disposal sites according to current national and/or regional regulations

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### GENERAL FEATURES

| PROPERTIES                                                     | TEST METHOD   | UNIT (MAX OR MIN)                      |                           | HGS, HGP, HGF | VGS, VGP, VGF |
|----------------------------------------------------------------|---------------|----------------------------------------|---------------------------|---------------|---------------|
| Dimensional tolerance requirements (EN 438-2:2016, Clause No.) |               |                                        |                           |               |               |
| Thickness                                                      | EN 438-2:5    | mm (max. variation)                    | 0,5 ≤ t ≤ 0,8             | ± 0,10        |               |
|                                                                |               |                                        | 0,8 ≤ t ≤ 2,0             | ± 0,15        |               |
| Length and with                                                | EN 438-2:6    | mm                                     |                           | + 10 / - 0    |               |
| Edges straightness                                             | EN 438-2:7    | mm/m (max. deviation)                  |                           | 1,5           |               |
| Edges squareness                                               | EN 438-2:8    | mm/m (max. deviation)                  |                           | 1,5           |               |
| Flatness                                                       | EN 438-2:9    | mm/m (max. deviation)                  |                           | 60            |               |
| General Requirements                                           |               |                                        |                           |               |               |
| Resistance to surface wear                                     | EN 438-2:10   | Revolutions (min.)                     | Initial Point             | 150           | 50            |
| Resistance to immersion in boiling water                       | EN 438-2:12   | Appearance, rating (min.)              | Gloss/other finishes      | 3 / 4         |               |
| Resistance to water vapour                                     | EN 438-2:14   | Appearance, rating (min.)              | Gloss/other finishes      | 3 / 4         |               |
| Resistance to dry heat (160 °C)                                | EN 438-2:16   | Appearance, rating (min.)              | Gloss/other finishes      | 3 / 4         |               |
| Dimensional stability at elevated temperature                  | EN 438-2:17   | Cumulative dimensional change % (max.) | Longitudinal              | 0,55          | 0,75          |
|                                                                |               |                                        | Transversal               | 1,05          | 1,25          |
| Resistance to wet heat (100 °C)                                | EN 438-2:18   | Appearance, rating (min.)              | Gloss/other finishes      | 3 / 4         |               |
| Resistance to impact by small diameter ball                    | EN 438-2:20   | Spring force, N (min.)                 |                           | 20            | 15            |
| Resistance to scratching                                       | EN 438-2:25   | Force (min.)                           | Smooth/ Textured finishes | 2 / 3         | 1 / 2         |
| Resistance to staining                                         | EN 438-2:26   | Appearance, rating (min.)              | Group 1 e 2 / Group 3     | 5 / 4         |               |
| Light fastness (xenon arc)                                     | EN 438-2:27   | Contrast                               | Grey scale rating         | 4 a 5         |               |
| Density                                                        | EN ISO 1183-1 | Density, g/cm3 (min.)                  |                           | 1,35          |               |

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| PROPERTIES                                                                                                                                                                                                                                                     | TEST METHOD        | UNIT (MAX OR MIN)        |                   | HGS, HGP, HGF                    | VGS, VGP, VGF |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------|-------------------|----------------------------------|---------------|
| Additional requirements for postformable - Type P laminates                                                                                                                                                                                                    |                    |                          |                   |                                  |               |
| Formability                                                                                                                                                                                                                                                    | EN 438-2:31 o 32   | Radius, mm               | Longitudinal      | 10 x laminates nominal thickness |               |
|                                                                                                                                                                                                                                                                |                    |                          | Transversal       | 20 x laminates nominal thickness |               |
| Resistance to blistering                                                                                                                                                                                                                                       | EN 438-2:33 o 34   | Time to blister, seconds | Thickness <0,8 mm | ≥ 10                             |               |
|                                                                                                                                                                                                                                                                |                    | (t2 – t1)                | Thickness <0,8 mm | ≥ 15                             |               |
| Additional requirements for reaction to fire - Type F laminates                                                                                                                                                                                                |                    |                          |                   |                                  |               |
| Reaction to fire                                                                                                                                                                                                                                               | NFP 92-501         | Clase M                  |                   | M1                               |               |
| Brandschacht                                                                                                                                                                                                                                                   | DIN 4102-1         | Clase B                  |                   | B1                               |               |
| Propagation of fire                                                                                                                                                                                                                                            | BS 476 - 7         | Clase                    |                   | Class 1                          |               |
| Heat release                                                                                                                                                                                                                                                   | IMO Res. A653 (16) |                          |                   | Approved                         |               |
| Calorific Power                                                                                                                                                                                                                                                | EN ISO 1716        | mJ / kg                  |                   | 18 - 20                          |               |
| Railways applications                                                                                                                                                                                                                                          | EN 45545-2         | R1 requirements          |                   | HL2                              |               |
| Typical EN 13501-1 classifications of HPL composite panels in the field of building construction                                                                                                                                                               |                    |                          |                   |                                  |               |
| In Europe, laminate panels intended for construction applications are tested in accordance with EN 13823 (1) (SBI test) and EN ISO 11925-2 (2) (Small-burner test), and the resulting reaction-to-fire performance is expressed in accordance with EN 13501-1. |                    |                          |                   |                                  |               |
| Composite panels comprising HPL type F bonded to non-combustible substrates                                                                                                                                                                                    |                    |                          |                   | B-s2,d0                          |               |
| Composite panels comprising HPL type F bonded to FR wood-based substrates                                                                                                                                                                                      |                    |                          |                   | C-s2,d0                          |               |
| Composite panels comprising HPL type S or P bonded to non-FR wood-based substrates                                                                                                                                                                             |                    |                          |                   | D-s2,d0                          |               |

SURFORMA® Laminates are classified in accordance with EN 438 – Sheets based on thermosetting resins (Usually called Laminates) – Part 3: Classification and specifications for laminates less than 2mm thick intended for bonding to supporting substrates. For more information about these properties, please refer to the corresponding Technical Datasheet.

Our due diligence system for tracing the origin of wood - FSC® & PEFC standards:

The well-known certification systems for sustainable forest management FSC and PEFC are equally evaluated by us to ensure traceability of timber throughout the supply chain, from harvest through to the finished product as a proof that the wood originally comes from certified and sustainably managed forests and other controlled sources.

In addition to providing assurance, FSC and PEFC certified materials can also support customers' LEED and BREEAM certification strategies.

## CERTIFICATIONS

