

# INNOVUS HPL STANDARD, POSTFORMING, FIRE RETARDANT

Decorative laminates for interior applications

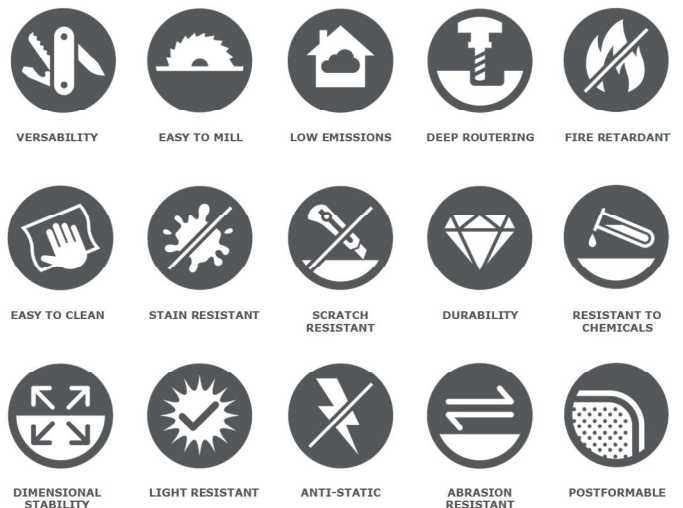
## DESCRIPTION

Innovus decorative laminates according to EN 438 are an excellent material for indoor surfaces, either horizontal or vertical. Innovus decorative laminates meet the stringent requirements for hygiene, fire resistance, humidity resistance and mechanical properties. The surface of the laminate is antibacterial, validated accordingly to Japanese regulation JIS Z 2801.

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

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

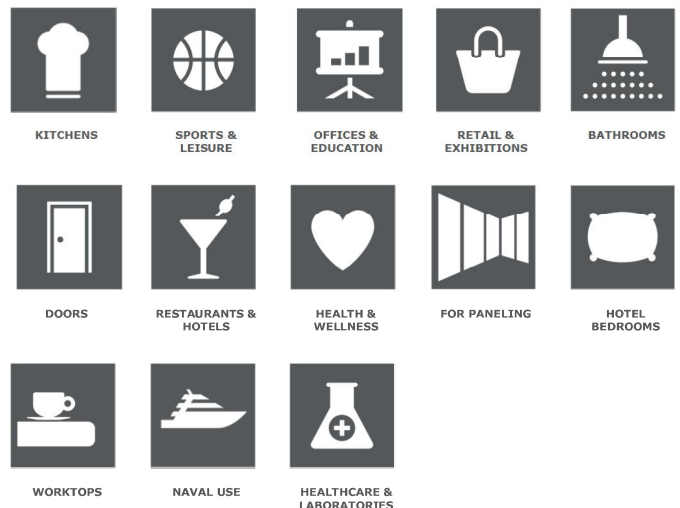
## PROPERTIES



## APPLICATIONS

Innovus decorative laminates are meant to be used in interior applications where design, appearance, quality, durability, resistance to stain and resistance to heat from ordinary sources are important features.

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



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## GENERAL FEATURES

PROPERTIES	TEST METHOD	UNIT (max or min)	HGS; HGP; HGF	VGS; VGP; VGF	
<b>Dimensional tolerance requirements</b>					
Thickness	EN 438-2:5	mm (max. variation)	$0.5 \leq t \leq 1.0$	$\pm 0.10$	
			$1.0 < t \leq 2.0$	$\pm 0.15$	
Length and width	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		
<b>General Requirements</b>					
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 to 5	
Density	EN ISO 1183-1	Density, g/cm <sup>3</sup> (min.)		1.35	
<b>Additional requirements for postformable - Type P laminates</b>					
Formability	EN 438-2:31 or 32	Radius, mm	Longitudinal	$\leq 10 \times$ laminate nominal thickness	
			Transversal	$\leq 20 \times$ laminate nominal thickness	
Resistance to blistering	EN 438-2:33 or 34	Time to blister, seconds (t2 - t1)	Thickness < 0,8 mm	$\geq 10$	
			Thickness $\geq 0,8$ mm	$\geq 15$	

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PROPERTIES	TEST METHOD	UNIT (max or min)	HGS; HGP; HGF	VGS; VGP; VGF
<b>Additional requirements for reaction to fire - Type F laminates</b>				
Reaction to fire	NFP 92-501	Class M		M1
Brandschacht	DIN 4102-1	Class B		B1
Propagation of fire	BS 476 - 7	Class		Class 1
Heat release	IMO Res. A653 (16)			Approved
Calorific Power	EN ISO 1716	mJ / kg		18 - 20
<b>Typical EN 13501-1 classifications of HPL composite panels in the field of building construction</b>				
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 or better	
Composite panels comprising HPL type F bonded to FR wood-based substrates			C-s2,d0 or better	
Composite panels comprising HPL type S or P bonded to non-FR wood-based substrates			D-s2,d0 or better	

## RECOMMENDATIONS

The Innovus laminates should be stored so they are protected from moisture, humidity and direct sunlight. The laminates should preferably be store 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 face inward, making sure to avoid any side-to-side sliding motions).

The Innovus laminates, with their durable, hygienic and waterproof surface, require no special maintenance. The 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.

The laminates are classified as non-hazardous; it is not necessary additional product description labels. It is a cured material and is chemically inert. REACH classification does not apply to them. Innovus HPL can be brought to controlled waste disposal sites according to current national and/or regional regulations.

Innovus 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 2 mm thick intended for bonding to supporting substrates. The physical and mechanical properties vary depending on the substrate used. For more information about these properties, please refer to the corresponding Technical Data Sheet.

### The use of Innovus laminates can contribute to the achievement of up to 2 LEED claims:

- The product contains recycled materials and can contribute to obtain LEED credits under MR Credit 4.
- Depending on the location of the construction project, the product can meet the requirements for materials extracted and manufactured regionally and contribute to obtaining LEED credits under MR Credit 5.

## CERTIFICATIONS



The mark of responsible forestry  
FSC® C013589

