

Compact technical data sheet

Property	Test method	Property or attribute	Unit	Values CGS (Compact Grade Standard
Resistance to surface wear	EN 438-2.10	wear resistance	revolutions	IP ≥ 600
Wear resistance (revolutions)		Classification / meaning		Practical example
< 150		Does not meet EN 438 minimum		Very weak surface, scratches/wear appear very quickly
150 – 350		Acceptable (meets EN 438 minimum)		Standard decorative laminates (e.g. vertical wall panels, cabinet sides)
350 – 600		Good wear resistance		Furniture surfaces, light-use tables, shelves
600 – 1000		High wear resistance		Kitchen worktops, desks, shop counters
≥ 1000		Very high wear resistance		Laboratory benches, industrial worktops, heavy-traffic surfaces
Resistance to dry heat (160°C)	EN 438-2.16	appearance	rating gloss finish	≥ 3
			other finishes	≥ 4
Grey Scale Value	Meaning		What the user would see	Requirement
5	No change		Surface looks completely unchanged	Excellent
4	Very slight change		Barely visible mark under certain light angles	Required for other finishes (matt/texture)
3	Slight change		Visible but small dull spot, acceptable for gloss finishes	Required minimum for gloss finishes
2	Distinct change		Clearly visible spot or discoloration	Fails
1	Severe change		Strong burn mark, surface permanently damaged	Fails
Test: a hot metal cylinder at 160 °C is placed on the surface → after 20 minutes it is removed.				
Resistance to wet heat (100°C)	EN 438-2.18	appearance	rating gloss finish	≥ 3
			other finishes	≥ 4
Value	Meaning		What user sees	
5	No change		No visible mark	
4	Very slight change		Barely detectable under certain angles	
3	Slight change		Small dull spot, acceptable for gloss	
2	Distinct change		Obvious visible spot	
1	Severe change		Strong mark, surface damaged	
A heated object with moisture/steam at 100 °C is applied to the surface. After cooling, the appearance of the laminate is evaluated.				

Res. To impact by large diameter ball	EN 438-2.21	drop height	mm (min)	1800 (t ≥ 6)
		indentation diameter	mm (max)	≤10
A steel ball with a large diameter (usually 42 mm, weight ~500 g) is dropped from a set height onto the surface.				
The height simulates how much energy the surface can absorb before damage becomes excessive.				
After the drop, the indentation (dent) is measured. If it is larger than 10 mm , the laminate fails the requirement.				
🔧 In practice: A 4 mm compact panel must survive a ball dropped from 1.4 m with only a small dent (≤ 10 mm).				
An 8 mm compact panel is expected to be stronger, so it must survive a higher drop of 1.8 m.				
Light fastness	EN 438-2.27	contrast	grey scale rating	≥ 4
Grey Scale Value	Meaning	Visible effect after exposure		Pass/Fail
5	No change	No visible fading, color remains identical		<input checked="" type="checkbox"/> Pass
4	Very slight change	Barely detectable fading, only visible under close inspection		<input checked="" type="checkbox"/> Minimum requirement
3	Slight change	Noticeable fading, visible color shift		✗ Fail
2	Distinct change	Strong fading, obvious to the eye		✗ Fail
1	Severe change	Very strong fading, color significantly altered		✗ Fail
The sample is exposed to intense artificial light (xenon-arc lamp).				
After exposure, the contrast between exposed and unexposed parts is evaluated.				
Resistance to staining	EN 438-2.26	appearance	groups 1 and 2	5
			group 3	≥ 4
Different groups of test reagents (staining agents) are applied to the surface.				
They remain in contact for a specified time (usually 16 hours).				
The surface is cleaned according to standard procedures.				
The laminate is evaluated on the staining scale (1-5) :				
5 = No visible change (excellent)				
4 = Very slight change (only visible under close inspection)				
3 = Slight change (still acceptable)				
2 = Distinct change (unacceptable)				
1 = Severe change (surface permanently stained)				
Group 1 – Mild staining agents		Group 2 – Medium staining agents		Group 3 – Strong staining agents
Substances commonly found in kitchens and homes, usually easy to clean. Examples: Acetone, Coffee, Tea, Alcoholic beverages (e.g. 48% ethanol), soap solution, Milk, Cola drinks 🔧 Requirement: Must score Grade 5 (no visible change).		More aggressive household substances, may leave faint marks if the surface is weaker. Examples: Olive Oil, Lemon Juice, Vinegar, Lipstick, Ink (ballpoint pen, felt-tip pen), Water colours, Mustard, Curry 🔧 Requirement: Must score at least Grade 4 (very slight change allowed).		Chemicals with strong pigments or solvents, most aggressive. Examples: Iodine solution (13g/L), Mercurochrome, Gentian violet, Hydrogen peroxide (30%), Hair dyes 🔧 Requirement: At least Grade 3 (slight change tolerated).

Food contact	Regulation EU n ^o 10/2011 and following amendments	food contact material performance	Suitability	Compliant - conditions of use reported in the Declaration conformity
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Compact laminates are **safe for food contact** under EU law.

They comply with **EU Regulation 10/2011** (plus updates).

The manufacturer provides a **Declaration of Conformity** that specifies any limitations (for example: “suitable for contact with dry and moist food, up to 70 °C, not for repeated contact with strong solvents or oils at high temperature”).

Imagine a **compact laminate kitchen worktop**:

If marked as **Compliant with EU 10/2011**, you can prepare food directly on it (bread, fruit, etc.) without risk of harmful chemical migration.

The **DoC** may say: not suitable for continuous contact with food at **>100 °C** or with certain solvents — but for all normal kitchen use, it is safe.

Fire performance				
Test Method	Standard	Classification		
		CGF	CGS	
Small flame and radiant panel	UNI 8457	Class 1	Class 1	
	UNI 9174			
	UNI 9177			
Class	Meaning	Behaviour under flame / heat	Practical interpretation	
Class 0	Non-combustible	Does not ignite, no flame spread	Inorganic materials (stone, concrete, metals, ceramics)	
Class 1	<u>Very limited contribution to fire</u>	<u>May char or blacken, but flames extinguish quickly; almost no flame spread</u>	<u>High-performance laminates (CGF, CGS), mineral boards, fire-retardant composites</u>	
Class 2	<u>Limited contribution to fire</u>	<u>Flames may appear but spread is slow and self-limited</u>	<u>Good quality treated woods, some FR panels</u>	
Class 3	Moderate contribution to fire	Sustained burning, flames spread noticeably but controlled	Standard woods, MDF with limited protection	
Class 4	Significant contribution to fire	Flames spread quickly, strong heat release	Plastics, untreated wood-based panels	
Class 5	High contribution to fire	Ignites easily, flames spread rapidly, high smoke and heat	Combustible plastics, foams, materials unsuitable for construction	
Spread of flame		BS 476-7	Class 1	Class 2

Smoke density and toxicity	NF F 16-101	min F2		min F2
Class	Meaning		Smoke / toxicity behavior	
F0	Very low smoke density, very low toxicity		Practically no harmful smoke generated	
F1	Low smoke density, low toxicity		Slight smoke, low toxic effect	
F2	Moderate smoke density, moderate toxicity		Medium smoke and toxicity, still acceptable in public/transport use	
F3	High smoke density, high toxicity		Heavy smoke, dangerous gases, not acceptable for safety-critical applications	
Reaction to fire SBI (EN 13823)	EN 13501-1	(t ≥ 3) B-s1, d0		(t ≥ 6) C, s1-d0
Class	Main meaning	Smoke rating	Droplet rating	Practical example
A1	Non-combustible, no contribution to fire	Only s1	d0	Concrete, stone, steel
A2	Practically non-combustible, very limited fire contribution	s1 or s2	d0 or d1	Gypsum board, mineral wool
B	Very limited contribution to fire	s1 = little/no smoke s2 = medium smoke s3 = high smoke	d0 = no droplets d1 = few, short d2 = many, long	Fire-retardant compact laminate (≥ 3 mm)
C	Limited contribution to fire	Same smoke/droplet scale	Same smoke/droplet scale	Standard compact laminate (≥ 6 mm)
D	Clear contribution to fire	Same smoke/droplet scale	Same smoke/droplet scale	Thin compact laminate (3–6 mm), untreated wood
E	Accepts only small flame test, ignites easily	No smoke/droplet subclasses	–	Plastics, polystyrene
F	Not classified	–	–	No fire performance declared
SBI = Single Burning Item test.				
A test specimen (a wall corner made of the material) is exposed to a propane burner flame (30 kW) for 20 minutes.				