

## Concreo<sup>®</sup> Data Sheet

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### Concreo<sup>®</sup> in brief:

Concreo<sup>®</sup> is a material produced in the solid state in panels, with valuable aesthetic characteristics. It allows the creation of artifacts or coatings perfectly similar to the cast concrete with the same ease of processing of a normal wooden panel, with the same tools, the same blades, machinery and equipment, screws and hardware as for wood, revolutionizing the use of cement in the field of Internal Design and high level furniture.

### Composition:

Concreo<sup>®</sup> is an eco-friendly material, available in solid dried panels ready to use, with applied protective and waterproofing finishes. It's obtained by a mixture of cellulose fibers fixed with plaster and acrylic resins classified as not hazardous strictly in accordance with the legislation in force.

Depending on the purpose, Concreo<sup>®</sup> can stand alone, without structural functions, or it can be coupled to other supporting materials. Concreo<sup>®</sup> can be applied or plated with Concreo<sup>®</sup> Special Adhesive or other common glues to support materials such as wood-based panels, aluminum, metal and any other material. For the plating, sometimes it may be necessary a counterbalancing with the same techniques used for normal wood panels, considering however the high stability of Concreo<sup>®</sup> to temperature and humidity variations.

### Use:

Concreo<sup>®</sup> is indicated for non-structural interior design applications: wall cladding, semi-finished furniture, ceilings, scenographic sets, design objects and all the other uses compatible with its technical features.

The excellent quality of the panel can cause the users to decide to use Concreo<sup>®</sup> other way than what explicitly stated by the manufacturer, taking in this case their personal responsible.

For technical details to support the designers, please refer to European Certification Test Reports about Natural Smooth finish, downloadable at [www.concreo.it](http://www.concreo.it) and schematically resumed in the table here below. For any additional information and for further technical support please use the contact form available to professionals at the website.

### Features of Concreo<sup>®</sup>:

- Superior aesthetic quality, with fibers in a natural random composition, unique and never repeated.
- Superior technical performance: waterproof, high resistance to stains.
- Material very easy to work with the same equipment of woodworking: shaping, drilling, milling, pantograph and laser engraving, folding, etc.
- Panels are easy to join, plate, stick and putty, to create perfect surfaces and volumes.
- Wall cladding quickly achievable, either by fixing the panels to a clip support, in metal or wood, either by applying them straight to the pre-existing walls using the suggested Concreo<sup>®</sup> Adhesive.

- Specific gravity less than half compared to concrete.
- Excellent grip of pins, screws, dowels and throughout the normal hardware on the market.
- High carrying capacity for suspended loads.
- Excellent acoustic insulation properties for a higher quality of life in very broad or noisy environments.
- High thermal insulation properties.
- Low elasticity but high resistance to mechanical stresses due to the homogeneous structure of the panels all along their thickness.
- Fire resistance with certified European classification.
- Stability of the panels in very humid environments or in the presence of high temperature variations.
- Eco-friendly material that allows it to be disposed as household waste or standard construction residue, always in accordance with the local regulations.

#### **Work finishings:**

Concreo<sup>®</sup> is a raw material available to the designer to project claddings, volumes and objects by shaping and joining the boards. Concreo<sup>®</sup> panels are manufactured and commercialized already finished, with high-tech surface treatments which make them resistant to aggressive external agents while maintaining at the same time the naturalness and the materiality of the aspect.

Concreo<sup>®</sup> is available in different surface finishes. Regardless of the chosen finish, aesthetics is always subject to natural differences making each board unique, adding value to the product. Differences in color, shades and streaks, cracks, holes, aren't therefore to complain.

The surface treatment creates a thin protective layer with a function of good resistance to staining agents, maintaining the nice aesthetic appearance. It is recommended for prudence to remove staining substances within 1 hour at least, to prevent even the slightest damage. Immediately remove any highly aggressive and staining substances such as alcohols, acids, ketones, ethanol or similar, absorbing them with a soft cloth, absolutely avoiding to rub the surface, to prevent or limitate the damage of the surface protection attacked by chemical agents. For more details, please check the Certification Test Reports downloadable at website [www.concreo.it](http://www.concreo.it).

Depending on the project, it could be necessary to finish the edges resulting from cutting applying a color, a stucco and a anti-dust paint, making sure to remove quickly from surfaces already treated any excess. For the best performance and processing it is recommended to use Concreo<sup>®</sup> repair and maintenance products, staining, finishing and bonding specifically selected and marked Concreo<sup>®</sup>. Ask your supplier for more information and availability.

**Technical data sheet – Certification for Concreo<sup>®</sup> Natural Smooth standard finishing.**

Metodo di prova <i>Test Method</i>	Caratteristiche <i>Characteristics</i>	Unità di misura <i>Unit</i>	Valore certificato <i>Certified value</i>		
			Gamma <i>Product range</i>	Spessore <i>Thickness</i> 5mm	Spessore <i>Thickness</i> 17mm
EN 323:1993	Massa volumica <i>Density</i>	Kg/m <sup>3</sup>	1.100 - 1250		
EN 310:1993	Resistenza a flessione <i>Bending Strength</i>	MPa		7,2	6,5
EN 310:1993	Modulo di elasticità <i>Modulus of elasticity</i>	MPa		3.081	4.716
EN 319:1993	Resistenza a trazione perpendicolare al piano <i>Tensile strength perpendicular to the plane</i>	MPa		0,71	0,88
EN 311:2002	Resistenza al distacco strati esterni <i>Peel strength</i>	MPa		0,46	1,76
EN 320:2011	Resistenza all'estrazione della vite dalla superficie <i>Screw holding face</i>	N/mm		37	68
EN 320:2011	Resistenza all'estrazione della vite dal bordo <i>Screw holding edge</i>	N		-	1059
EN 317:1993	Rigonfiamento dopo 24h di immersione in acqua <i>Swelling in thickness after immersion in water</i>	%		0,0	0,2
EN 321:2001	Resistenza all'umidità prove cicliche: rigonfiamento <i>Moisture resistance under cyclic test: bulge</i>	%		0,2	0,5
	Modulo di elasticità <i>Modulus of elasticity</i>	MPa		937	3.353
EN 1087-1:1995	Resistenza all'umidità prova in acqua bollente <i>Moisture Resistance – Boil test</i>	MPa		0,09	0,07
EN 12720:2013	Resistenza delle superfici ai liquidi freddi <i>Surface resistance to cold liquids</i>	Level	E		
EN 12721:2009	Resistenza delle superfici al calore umido <i>Resistance to wet heat</i>	Level	A		
EN 12722:2009	Resistenza delle superfici al calore secco <i>Resistance to dry heat</i>	Level	C		
UNI EN 15186:2012	Resistenza alla graffiatura <i>Scratch Resistance</i>	N	10		
UNI EN 15187	Resistenza alla luce <i>Resistance to light</i>	Level	4/5		
UNI 9300:1988	Tendenza a ritenere lo sporco <i>Tendency to retain dirt</i>	Level	4		
UNI 9429:1989	Resistenza agli sbalzi di temperatura <i>Cold check test</i>	Level	5		
EN ISO 16000	Emissioni composti organici volatili in camera di prova <i>Emission rate of volatile organic compounds - test</i>	Décret 2011-321	A+		
EN 13501-1	Classe di reazione al fuoco <i>Reaction to Fire</i>	EU Class	B-s1-d0	A2-s1-d0	B-s1-d0
DM 15/03/2005	Classe di reazione al fuoco <i>Reaction to Fire</i>	IT Class	Classe 1	Classe 1	Classe 1

**Product Range:**

**Finishing:** Concreo<sup>®</sup> is available in 2 different finishes: Smooth and Antiqued. The Antiqued finish is in 2 variants: Natural and Dark.

On demand are available stronger finishings for external use.

**Thickness:** 4 available thickness: 5 - 9 - 11,5 - 17 mm. Special thickness are available on request.

**Sizes:** Concreo<sup>®</sup> panels are marketed in standard sizes as per the table below. It is possible to evaluate special sizes on request, maximum size 1.250x3.000 mm in thickness 11,5 mm.

Thickness (mm)	Finishings	Density kg/m <sup>2</sup>	Standard panel size (mm)	Standard surface per panel (m <sup>2</sup> /pc)	Weight per panel (kg/pc)
5	NATURAL SMOOTH, NATURAL OLD LOOKING, DARK OLD LOOKING	6,25	664x1.250	0,83	5,2
9	NATURAL SMOOTH, NATURAL OLD LOOKING, DARK OLD LOOKING	11,25	1.250x2.540	3,175	35,7
11,5	NATURAL SMOOTH, NATURAL OLD LOOKING, DARK OLD LOOKING	14,5	1.250x2.540	3,175	46
17	NATURAL SMOOTH, NATURAL OLD LOOKING, DARK OLD LOOKING	21,25	1.250x2.540	3,175	67,5

**Precautions:**

To move and handle Concreo<sup>®</sup>, please take care of its low elasticity. Always support the slabs in a distributed manner, in order to avoid the fracture.

Protect the edges from shocks to avoid cracks.

The surface protection is not cutproof so, please, always protect surface from contact with blades and sharp objects that could damage it.

Store in a dry environment, away from direct light, lying flat on uniform supports to prevent it bows.

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The information contained in this sheet are based on our current knowledge of the product and certified data respecting the most strict European standard. Product features can change with no obligation to inform the holders of this data sheet. The user is obliged to verify the updating of the data sheet at the time of purchase of the product and the suitability of such information in relation to the specific use of the product. For more information, please visit [www.concreo.it](http://www.concreo.it) or please contact by e-mail the Technical Support Department at [concreo@concreo.it](mailto:concreo@concreo.it).