

Glass-fiber reinforced concrete or GFRC is a type of fibre-reinforced concrete containing fibrous material which increases its structural integrity. It contains short fibres that are uniformly distributed and randomly oriented. The character of fibre-reinforced concrete changes with varying mixtures, element geometries and surfaces. The product is also known as GRC in British English.

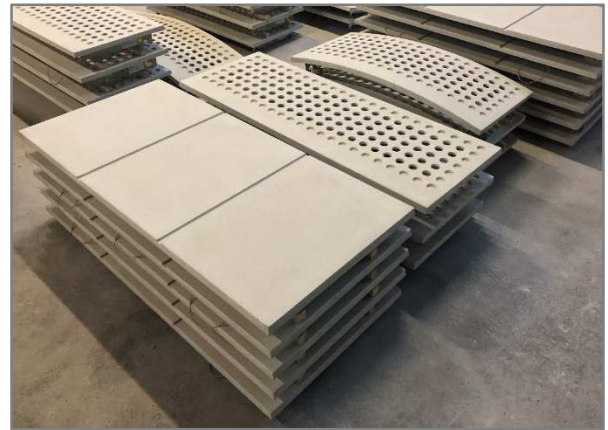
Lindner manufactures premium GFRC products and normally uses spray methods in the production processes. Sprayed GFRC is generally stronger than premix vibration cast processes. The thin-walled design results in enormous weight savings compared to conventional types of concrete. Especially for cladding and elements with high aesthetic demands on 3D shapes, surfaces and colours, LinCrete GFRC offers project-specific solutions combining the well-established advantages of Lindner Group's facade and interior construction products.

PROPERTIES

- + Inherently stable
- + Solvent-resistant
- + Temperature/frost-resistant
- + UV-resistant
- + Weatherproof

APPLICATIONS

- + Facades and Roofing
- + Cladding for interior suspended ceilings and walls
- + Renovation of historic buildings and structures
- + Railway station and tunnel claddings
- + Noise barriers
- + Public elements and artificial landscaping
- + Regious buildings
- + Balustrades
- + Custom 3D-shaped structures
- + And many further applications



CERTIFICATES / ASSOCIATION MEMBERSHIPS





TECHNICAL DATA

Density	2,000 – 2,600 kg/m ³
Compressive strength	40 – 80 N/mm ²
Flexural strength	8 – 40 N/mm ²
Water diffusion resistance	50 – 200 μ
Linear expansion	E-5: 1.00 – 1.50 x 10 ⁻⁵ 1/K
Glass-fibre content	Average of 5% of total weight



DIMENSIONS

Element width	Standard up to 3,000 mm ²
Element length	Standard up to 6,000 mm ²
Material thickness	Min. 6 mm for interior fit-out elements; min. 12 mm for façade elements / typical exterior applications
Joint width	Min. 10 mm for individual demountability

*Please note that larger elements (e.g. length up to 11000 mm) are producible, however, very large sizes might result in unwieldy and therefore also uneconomic elements if appropriate logistics chain methods and sufficient space on the transportation routes and on the building site can not be ensured.



ACOUSTICS

Sound absorption	
Tested to EN ISO 354	Up to α _w = 0.60, sound absorption class C
Tested to EN ISO 354 rated to ASTM C 423	Up to NRC = 0.70



FIRE PROTECTION

GFRC element including acoustic tissue and mineral wool backing	
Tested to EN 13501-1	A2-s1, d0



SAFETY PROTECTION

Seismic protection	Earthquake-proof design available on request
Bomb-blast resistance	Average 150 kPa peak pressure for minimum material thickness of 6mm



SUBSTAINABILITY

Environmental product declaration (EPD)

According to ISO 14021

Self-declared



CERTIFICATION

EN 1169 / 1170 / 12467 / 12878 / 14649 / 15191 / 15422



ADDITIONAL EQUIPMENT / SUBSTRUCTURE OPTIONS

Lindner pin channel substructure	With profiles embedded in the GFRC element
Undercut anchor fastening	Combinable with different substructure systems (e.g. with agraffe profile substructure systems approved for GFRC cladding elements)
Self-standing by means of floor-mounted studs	
Self-standing without substructure	E.g. if used as foundation element on the ground
Lindner wall cladding substructure or partition studs systems	
Lindner hook-on ceiling substructure systems	
Project-specific customised substructure systems by Lindner	



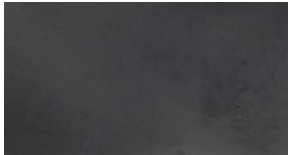


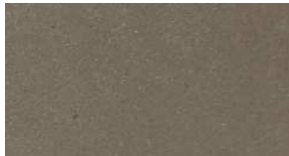






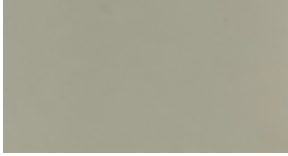




SURFACES

Sandblasted	Grades: light medium heavy; individually as agreed upon
Acid etched	
Grinded	
Polished	
Painted	Paintable with standard concrete paint
Printed	For further information see LinCrete print
Plaster surface	
Various performance coatings	E.g. hydrophobized (coated water-repellant and / or mass-hydrophobized), anti-graffiti coating



TABLE OF COLOURS – STANDARD COLOURS


Customised, project-specific solutions possible

	SANDBLASTED (MEDIUM)	SMOOTH FINISH
SLATE GRAY		
PASTEL VIOLET		
GREY BEIGE		
BEIGE GREY		
BEIGE		
YELLOW GREY		
RESEDA GREEN		
ORANGE BROWN		



POSSIBILITIES OF MOULDING / TEXTURED SURFACES

Customised, project-specific solutions possible

FLOOR TILES			
LINEAR SLAT APPEARANCE			
PERFORATION			
ROUGH PLASTER			
FINE PLASTER			
WOODLIKE APPEARANCE			
STONE / TERRAZZO SURFACE			
BRICK WALL APPEARANCE	