

Rieder

Matrix 3.0

The world's first CO₂-reduced glassfibre reinforced concrete

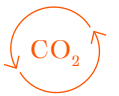
Rethinking
building skins



50% LESS
CEMENT



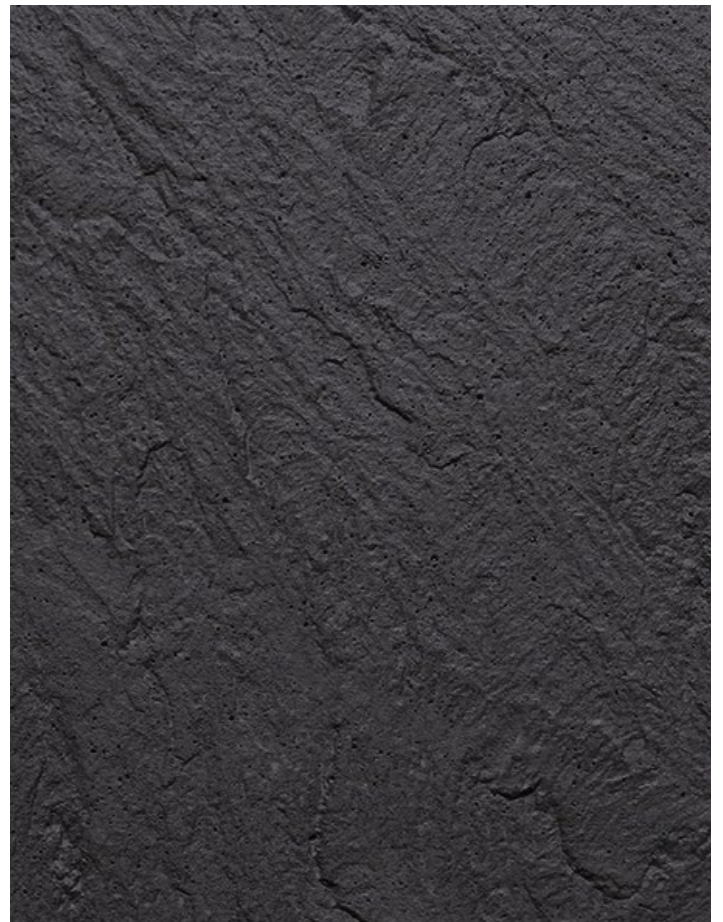
23% CO₂
SAVINGS



WITH NATURAL
POZZOLANS



On its way to climate neutrality, Rieder developed Matrix 3.0, a CO₂-neutral material for sustainable facade elements. 50% of the conventional cement was replaced by local natural pozzolana. The rock flour, which has been used in the construction of buildings since ancient times, has excellent properties in terms of structural density and hardening. The cement substitution allows a CO₂ reduction of 30% compared with Matrix 2.2 and a reduction of 23% for the facade elements. From summer 2023, Matrix 3.0 will be used for the products concrete skin, öko skin and formparts. It represents the preliminary stage to cement-free production.

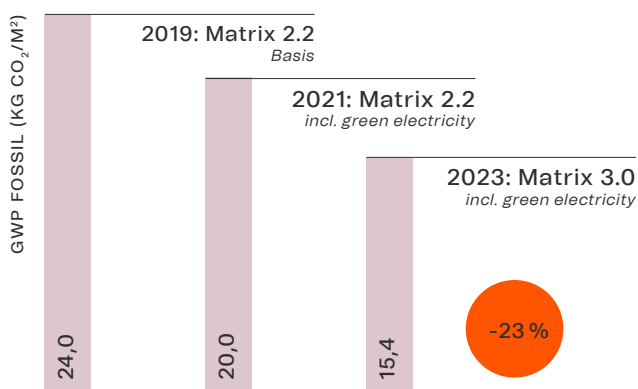


First implementation on the Rieder Campus in Maishofen

Characteristics

MATERIAL	fibreC Matrix 3.0	CO ₂ -reduced concrete matrix: Replacement of 50% of the cement with natural pozzolans
	CO ₂ footprint	-30% CO ₂ versus Matrix 2.2, GWP fossil: 15.4 kg CO ₂ / m ²
	Produktionsverfahren	extrusion
	Reinforcement	glassfibre textile fabric approved by the building authorities
	Health standard	free of crystalline silica (< 1 M.-%)
PRODUCTS	concrete skin (large size)	1200 x 2500, 3100, 3600 x 13 mm
	öko skin (concrete slats)	147 x 1800 mm; 70 - 302 x 700 - 2500 x 13 mm
	formparts (formed elements)	max. length 3600 x 13 mm
VERSIONS	Colours phase 1	pine green, anthracite
	Colours phase 2	chrome, liquid black, terra, oak, walnut, ebony, terracotta, oxide red, burgundy, merlot
	Surfaces	ferro, ferro light, matt
	Textures	standard, slate (more on request)
PROPERTIES	Surface protection	without surface protection (hydrophobic coating on request)
	Dead load/weight per unit	26 - 31,5 kg / m ²
	Classification fire behaviour	A1 – non-combustible, A2-s1,d0 – non-combustible (EN 13501-1)
	Fastening visible	rivets, screws
	Fastening concealed	bonding, undercut anchor

Ecological indicators



Key figure	Unit	Cradle to Gate A1-A3
GWP Global warming	kg CO ₂	15,4
PENRT Non renewable energy	MJ/m ²	168,9
CO ₂ -savings cement	%	30
CO ₂ -savings panel	%	23

