



Concrix[®]

The economical and ecological
alternative to steel fibres in shotcrete



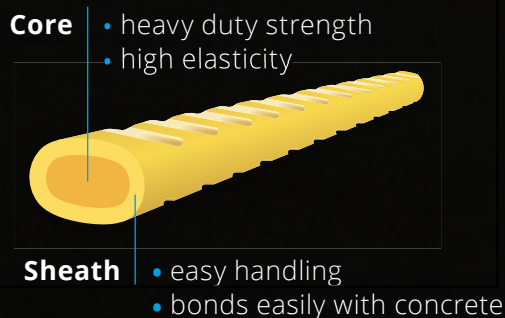
A **PowerPak** improves concrete properties

THE END PRODUCT – A POWERPAK

Concix is a unique, bicomponent synthetic fibre with a structured surface. The fibre core – thanks to its high elasticity – offers maximum strength, while the special, structured sheath ensures excellent bonding to the concrete.

For simple application and dosing, the fibres are bundled into a PowerPak that can be easily added to fresh concrete. The synthetic hull dissolves within seconds during mixing, releasing the individual fibers and allowing them to disperse evenly. Up to 150,000 fibres per kg of Concix provide optimal, three-dimensional reinforcement.

Composition of the unique **BICOMPONENT MACROFIBERS**



Maximum performance at a low cost

BICOMPONENT STRUCTURE PROVIDES MAXIMUM PERFORMANCE

Various EFNARC tests conducted by independent testing institutions show the excellent working capacity of Concrx. Over 1,000 J with just 4.5 kg/m³ Concrx with 25 mm distortion are possible.

PROVEN CREEP RESISTANCE

A long-term creep test conducted by an independent testing institution clearly shows that the fibre structure prevents bond creep. The test, which can last up to 3,000 days, is the only one of its kind in the world.

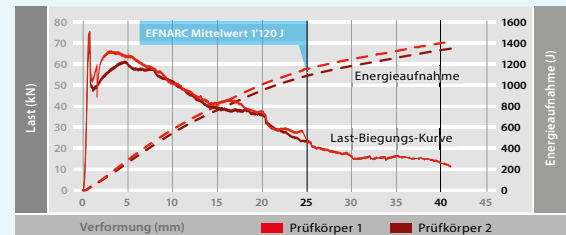
EXCELLENT DURABILITY

Concrx fibres are resistant against aggressive waters (de-icing salt, sulfate). While steel shows significant reduction in mechanical properties after just one year, the capacity of Concrx does not drop.

OPTIMAL FIBER DISTRIBUTION

The even distribution of approximately 500,000 per m³ of concrete is responsible for the exceptional values shown above (with a dose only 4.5 kg/m³).

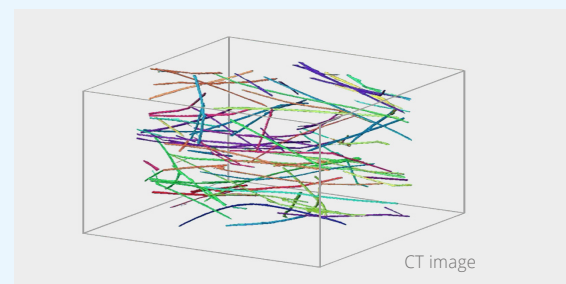
The image, which was created using computer tomography, threshold calculation and morphological data analysis, shows the excellent spatial distribution of Concrx in the concrete matrix.



Source: EMPA Material Science & Technology, Switzerland

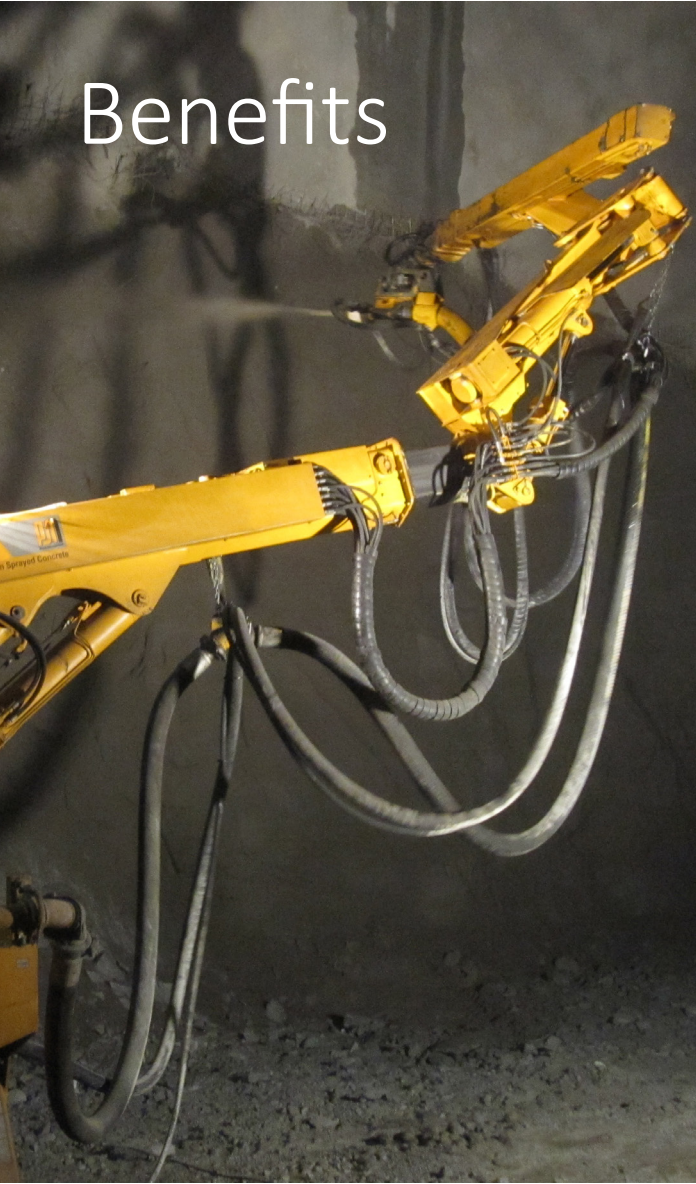


Shotcrete - Barmasse Tunnel



Source: EMPA Material Science & Technology, Switzerland

Benefits



Excellent working capacity even with low fibre quantities

Greatly reduced fibre and concrete use thanks to much lower recoil compared to steel fibres

Reduced carbon footprint of the overall design

Shorter process times through faster layer strengthening

Protects machines, hoses and nozzles, increasing their durability

Easy handling due to light weight

Safer and simpler handling than steel

No injury risk from protruding fibres

No damage to cables, hoses, etc., from protruding fibres

No risk to sealing sheets from visible fibres

Long life (corrosion-resistant, alkali-resistant, no creep)

Lower carbon footprint and environmental impact