



## FuturZement C.1 | FuturBeton C.1

*nanstructured cement/concrete*

high strength ☀ CO2-low ☀ super durability

all advantages for EUR 7.00 / ton of concrete

(additional full cost, CM900, Germany 2012-10)



### Industry:

**construction-industry**

with FuturBeton can build more faster | sleeker | higher | cost-effective  
| durable | environmentally friendly with | better surface and | less steel  
the today's semi-waste GGBS turns into a super-activated high value  
product (30% additive to OPC > FuturZement)

**steel-industry**

### Product/innovation 100% ready to market proved:

**technologically** → public bridge in Germany !  
**economically** → +7.00 EUR/ton as of 43,000 tons p. a. (1x Simoloyer® CM900)  
**ecologically** → 20 % CO<sub>2</sub>-emission savings in cement manufacturing process

### Technical advantages:

**strength** 100-145 MPa after 28 days  
**early strength** 40 MPa on the first day  
**durability & surface** super fine pores, to date full performance after 1 year under water  
**application** except Simoloyer® plant, common cement/concrete processing route

### Cost advantages:

**higher strength** → less material, replace steel  
**higher early strength** → build faster  
**higher durability** → less material, build less often  
**better surface** → can represent cost-advantages as well  
**CO<sub>2</sub> savings** → can represent cash earnings/savings as well

Schedule & volumes	option (a)	option (b)	option (c)
equipment scale Simoloyer®:	CM100	CM400	CM900
estimated annual production and CO <sub>2</sub> -saving capability [t]			
GGBS	240	960	2.160
good for FuturZement/cement	800	3,200	7,200
good for FuturBeton/concrete	4,800	19,200	43,200
results in an annual CO <sub>2</sub> -emission saving	95	380	855
cost approximates and schedule			
additional product cost per ton of concrete, based on German full-cost calculation, 10-2012	€ 22.00	€ 10.00	€ 7.00
time-scale, set-up/start of the new production/product line	10 months	16 months	20 months
total cost at partner Zoz [Mio€]	1.5	2.9	4.3
total cost at partner a, b.. [Mio€]	tbc	tbc	tbc



the bridge "Rosenthal" at Olpe/Germany established on November 14, 2012



12 ton roof balustrade, Villa ZCS at Siegen/Germany established on June 21, 2013