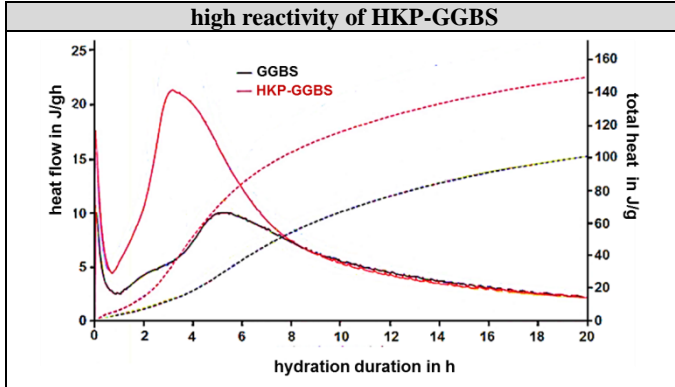
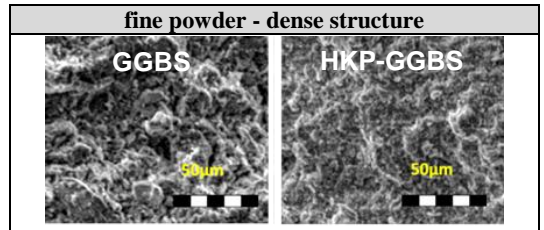


## Nanostructured Ground Granulated Blastfurnace Slag (HKP-GGBS) - additive for sustainable construction materials with high durability -

HKP-GGBS represents Ground Granulated Blastfurnace Slag super activated by High Kinetic Processing (HKP) applying the Simoloyer<sup>®</sup> technology. This results into nanostructured cement which is super reactive and concrete that is more than twice as strong as ordinary concrete at superior durability and substantial CO<sub>2</sub>-emission saving.

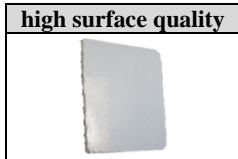


HKP-GGBS - values	
specific surface area	2.2 m <sup>2</sup> /g
particle diameter	7.4 μm
density	2.9 g/cm <sup>3</sup>
Blaine surface	~ 6700 cm <sup>2</sup> /g



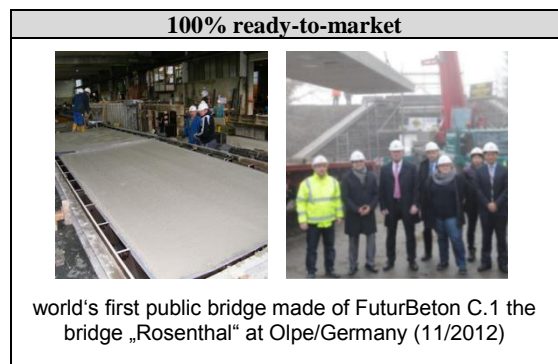
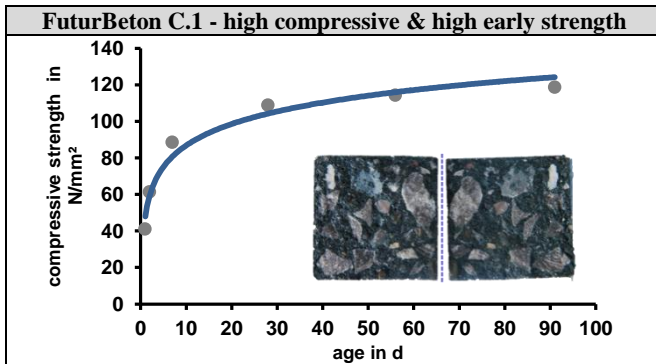
- HKP-GGBS - properties**
- sustainable recycling of industrial waste material
  - very fine powder material
  - realization of sophisticated surface quality
  - substitution of high lime clinker without loss of reactivity
  - high resistance against aggressive media
  - additive for FuturZement C.1 or alternative slag cements

FuturZement C.1 - values	
cement strength class	52.5 R
composition HKP-GGBS/OPC	30% / 70%
specific surface area	2.7 m <sup>2</sup> /g
particle diameter	7.3 μm
density	3.03 g/cm <sup>3</sup>
Blaine surface	5670 cm <sup>2</sup> /g



- FuturZement C.1 - properties**
- enormous CO<sub>2</sub>-saving potential: 120 kg CO<sub>2</sub>/t cement (20%)
  - dense packaging due to particle size distribution
  - superior cement/binder for FuturBeton C.1 and alternative construction materials

packaging	
liter	kg
13	10
31,5	25



FuturBeton C.1 - properties & values	
concrete strength class	> 100 N/mm <sup>2</sup> (High Performance Concrete)
weathering (CDF-method)	294 g/cm <sup>2</sup> (max. 1500 g/cm <sup>2</sup> allowed)
chloride migration coefficient (CMC-method)	1.4 · 10 <sup>-12</sup> m <sup>2</sup> /s (very low diffusion after 95 days)
sulphate resistance	high (nearly no expansion)

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