Omya Construction

Betocarb® Grades

Selected ground calcium carbonate
for dry mortar and concrete

THINKING OF TOMORROW

Betocarb Grades

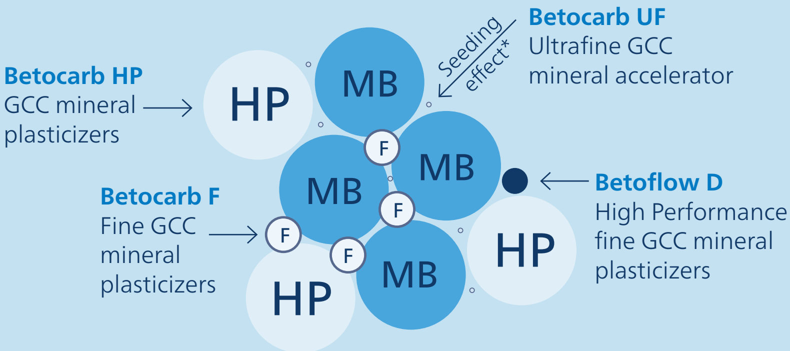
The family of selected GCC to support your innovation

New mineral addition

Due to environmental reasons, the demand for technical ground calcium carbonate to formulate ecological mortar & concrete is rapidly growing. The Betocarb series provide a high purity calcium carbonate combined with a range of particles to enhance the packing and rheology behavior of innovative cement based products. Offering, a new and sustainable mineral addition to support the growth of infrastructure development resulting in an enormous demand for cement and supplementary cementitious materials.

Highlights

- ✓ Natural and sustainable product
- ✓ High compatibility with chemicals
- ✓ High and consistent quality
- ✓ Controlled grading



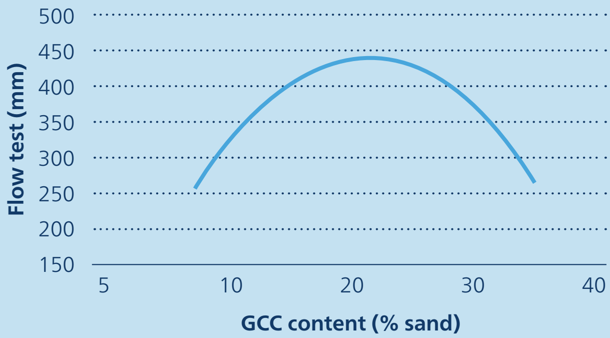
MB = Mineral Binder (or with Cement)

Products	Methylene blue value (g/kg)[1]	d50% (µm)[1]	BET Surface area (m^2/g)[1]
Betocarb	< 10	5 - 30	
Betocarb HP	< 3	5 - 15	> 0.3
Betocarb F	< 3	3	> 2.5
Betocarb UF	< 3	1	> 5

* Seeding effect: The very low particle size (meaning a large available surface) of the Ground Calcium Carbonate Betocarb UF provides a high number of nucleation sites for the cement particles. It will not only fill the voids between cement grains, but also accelerate the hydration process and improve the workability, mechanical properties and durability through the dilution, nucleation and even chemical effects.

[1] Indicative values

Stability & packing improvement with Betocarb HP according to the internal LGSystem method



Lower the carbon footprint of your dry mortar and concrete formulation up to 30%*

Self-leveling screed

Self-consolidating concrete

Indicative values

SLM – density 2.2, Compressive strength 25 MPa	Parts by weight (g)
Portland cement	160
Betocarb HP	110
Sand	620
Chemical admixtures	10
Water	100
Total	**1000**

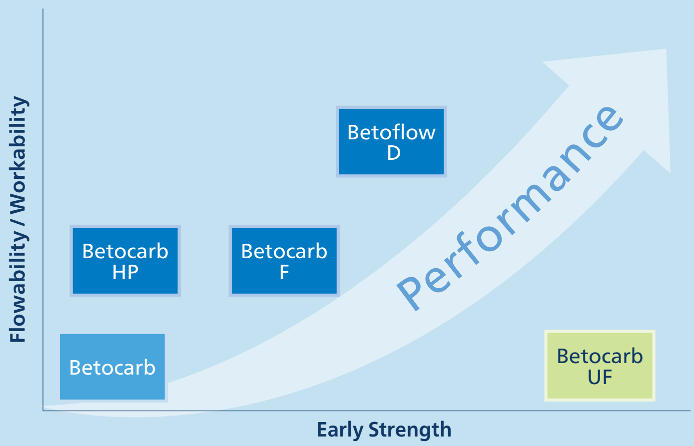
Water 20% of the total mass
SCM: Supplementary cementitious material

Indicative values

Compressive strength 120 MPa	Parts by weight (g)
Portland cement	135
Betocarb HP	80
Sand	340
Coarse aggregates	350
Chemical admixtures	2
Water	93
Total	**1000**

Water 9% of the total mass

Betoflow D - the selected fine ground calcium carbonate to support your innovations and developments



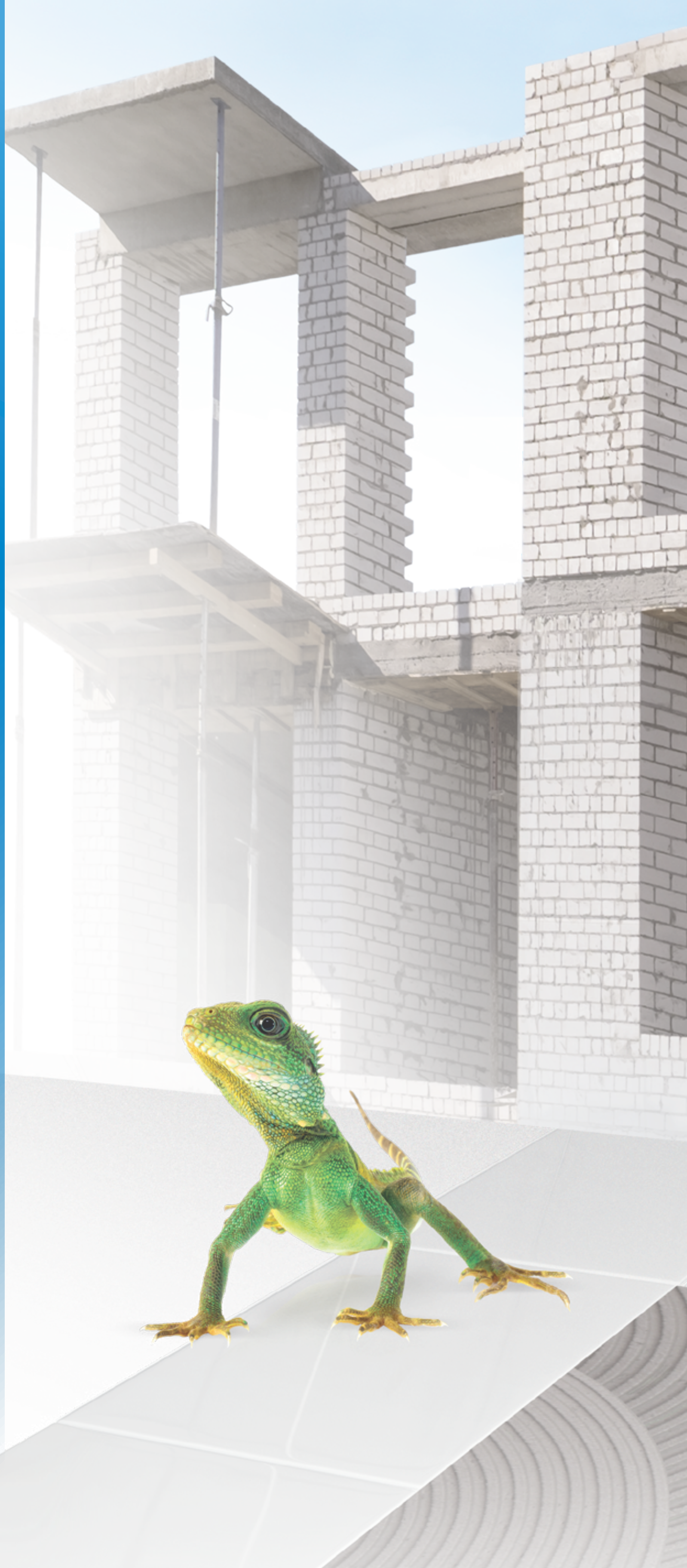
* Sources: **Cement:** MPA (https://cement.mineralproducts.org/documents/Factsheet_18.pdf); **Sand, aggregate, water:** Ecoinvent; **GCC:** CCA the other constituents (chemical admixtures) are estimated

Key benefits

- ✓ Easy fines content optimization
- ✓ Enhancement of particle packing & stability
- ✓ Increasing flowability & workability
- ✓ Better esthetics & colors
- ✓ Improved early age strength
- ✓ Reduction of bleeding & shrinkage
- ✓ Contribution to lower CO_2 emissions

Applications

- ✓ Dry mortar and concrete
- ✓ Self compacting concrete (SCC)
- ✓ Self-leveling mortars (SLM)
- ✓ Self-leveling compound (SLC)
- ✓ 3D printing / shotcrete
- ✓ Architectural concrete
- ✓ High performance concrete (HPC)
- ✓ Ultra high performance concrete (UHPC)
- ✓ Eco concrete



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