

Cembond®956

Reactive polymer additive for cementitious building materials

Cembond®956 is a cement reactive and water mixable plastic, with outstanding properties. Cembond®956 links and reacts with portland cement materials. Concrete and mortar made of cementitious materials in combination with Cembond®956 will have complete new and unique properties.

The result of this reaction is a chemical link between mineral binding material (cement) and Cembond®. Mixtures made of Cembond®956 and cement (as well as cementitious materials) are real polymer concretes.

Based on the direct reaction between cement and Cembond®956 the additive is much more effective than usually known polymer additives based on emulsion, latex or epoxy basis which enhance just the adhesion and the module.

Cembond®956, on the other hand, enormously improves all properties of concrete and cement-bound building materials made from Portland cements. Due to the chemical reaction and bonding between cement and Cembond®, quality enhancements of up to 100% are achieved compared to previously known admixtures made of polymer latex or cement-compatible epoxy resins.

The critical temperature-dependent adjustment of the resin setting speed required for the addition of two-component epoxy resins to cement mortars (ECC) is not necessary with Cembond®956.

The cross-linking reaction between cement and Cembond®956 starts together with the normal setting of the cement. It is not necessary to take any special precautions during the preparation of the mortar.

**Cembond®956:
For industrial floors
made of concrete
with highest possible
quality
- without additional
coating**



Processing advantages

Mortars made of Cembond®956 are easier to apply. They are softer, more plastic, adhere better when fresh and are easier to compact. The water consumption of the mixtures is significantly reduced.

With Cembond®956 makes it possible to produce cement-bound mortars and coating compounds with properties that were previously only known with synthetic resin-bound polymer concrete.



- **Roads and driveways**

- **Monolithic industrial floors and floor screeds made of concrete**

With Cembond®956 tempered monolithic floors, streets made of concrete or floor screeds made of concrete finished with Cembond®956 can be used early.

They achieve a very high final strength and are liquid-tight. The resistance to wear and chemicals - including de-icing salts, greases and oils - is greatly improved.

- **Pavement slabs and interlocking paving stones**

- **Concrete products**

End products set faster with Cembond®956 and the result is harder and ruggedised against abrasion and dirt. Blooming will be mostly avoided by the catch of free calciumhydroxyde.

- **Roofing tiles**

The increase in hardness and bending strength of Cembond®956 can be used to produce parts with reduced thickness and therefore lower weight. Advantage: Great savings in costs for storage, transport and installation.

- **Spun concrete parts**

Cembond®956 makes concrete sewer systems more resistant to aggressive and polluted water and mechanical wear. In thin-walled and reinforced parts (e.g. masts) the dense structure prevents water from penetrating and protects the reinforcing steel from corrosion.

- **Repair- jointing and grouting mortar**

- **Plaster**

Cembond®956 greatly improves the adhesion to the substrate and the adhesion between mineral substrates or set concrete surfaces and fresh mortar.

Mortars made of Cembond® are easily to apply, malleable and adhere much better to the substrate when freshly applied.

Shrinkage during hardening is minimised and the formation of cracks is prevented.

Water and pollutants cannot penetrate Cembond®956hardened mortars anymore, ugly efflorescence is prevented.

- **Injection cement**

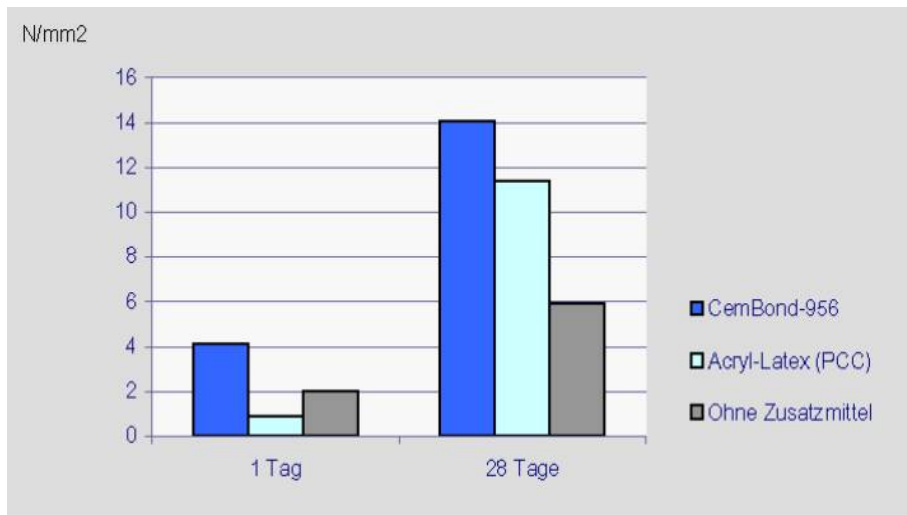
Cembond®956 acts as a pumping additive and stabilisation for the slurry which prevents demixing of the compound. The adhesion to the substrate is more than doubled.

Properties The following results show the significant quality increase of cementitious mortars tempered with Cembond® 956 in comparison with a traditional additives or without any tempering.

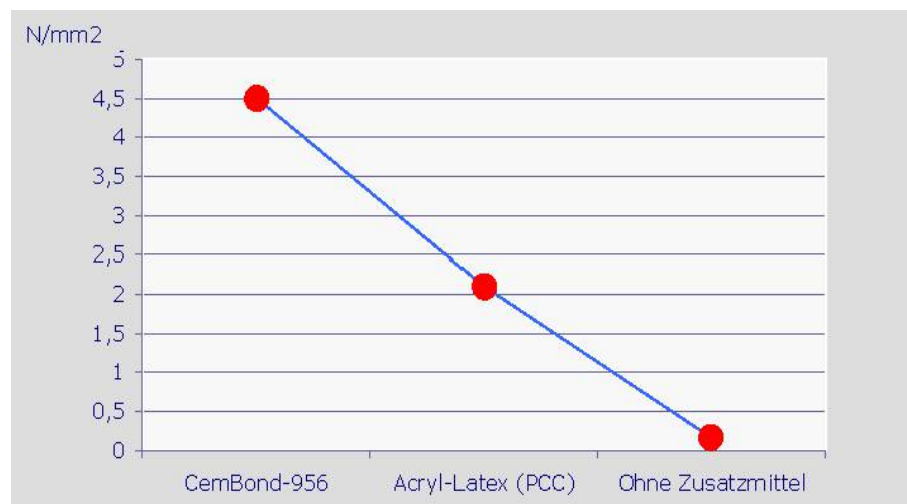


Composition	CEM I + Sand	1 : 3 GT
Testing object with Cembond®956 -	Additional amount 20 % on cement / WZ 0,26	
Testing object with acrylic latex	20 % on cement / WZ 0,27	
Testing object without additive	WZ 0,41	

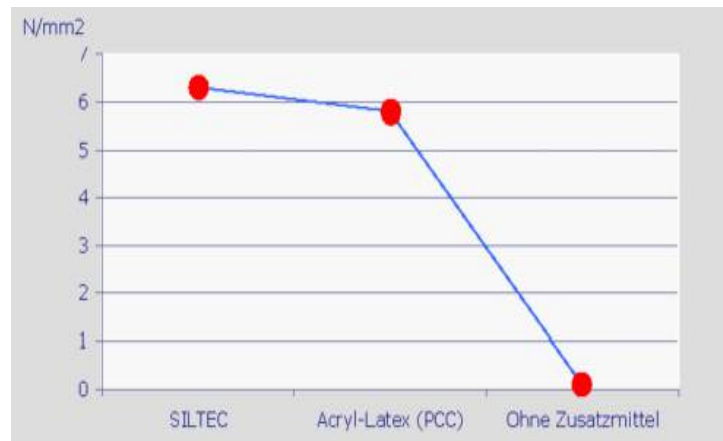
Much better bending tensile strength



Much better adhesion



**Excellent
chemical
resistance**



Application Cembond®956 is a low viscosity, water miscible liquid and can either be mixed together with the mixing water or subsequently incorporated into the mortar or concrete mixes. It is recommended to add between 2.5 and 20 %, based on the cement content, depending on the grain structure of the mixture and the desired effect. Additions of > 20% on cement are not recommended.

Cembond®956 liquefies the mixture and has a plasticizing effect. The water requirement of mixtures containing Cembond® is significantly lower than that of a pure mixture of aggregate and cement. On average, the necessary amount of mixing water can be reduced by 20 - 25 % when using Cembond®956 [the water content of Cembond®956 (approx. 50 %) must be taken into account].

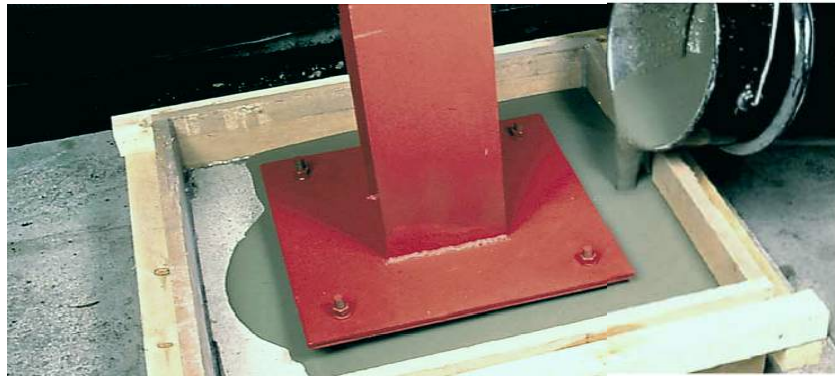
According to our tests, the product is well compatible with the usual concrete admixtures, preliminary tests are nevertheless recommended. In many cases, when using Cembond®956, conventional concrete additives can be saved or at least the quantity used can be reduced significantly.

Important: Cembond®956 **does not work** in combination with aluminate cements. This is important e.g. for cementitious levelling compounds for screeds, which often contain aluminate cements. Cembond®956 is not suitable for these products.

Properties

Aspect	: Liquid, blue- opaque
Odour	: Very weak
Reactive solid material	: Approx. 45 %
Viscosity (20°C)	: 70 – 80 mPa.sek (cStk.)
Density	: Approx. 1,05
pH	: 5 – 5,5
Cleaning/Thinning	: With water (unlimited mixing)

**Grouting mortar
with Cembond®956:
Easy to apply,
excellent adhesion,
high stability!**



**Safety
Storage
Disposal**

Cembond®956 is non toxic and doesn't have any transport restriction based on ADR rules. We recommend the usual security of working safety and hygienic standards. Cembond®956 is not suitable as food for human or pets.

Dirt with Cembond®956 should be cleaned immediately with water. Hardened material is insolvable with almost any solvent and very difficult to remove.

In storage condition Cembond®956 is harmless. As delivered - in unopened original cans - the shelf life is at least 12 months. **The material is sensitiveto frost and must be stored at > 5°C. Keep away from children.**

Hardened material left overs are normal waste, this applies to empty cans as well. Liquid rests should be hardened with cement, mortar or gypsum. Disposal as building rubble. Liquid Cembond® is special waste.

These technical information describe the present-day state of knowledge these product. They should only inform about the possibilities of application and could not release the applicator of his commitment to check the possibility to use the product for the required application. Information for processing can be found in processing instructions of our product. Information about safe handling can be found in our current safety data sheet.

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passion to invent 