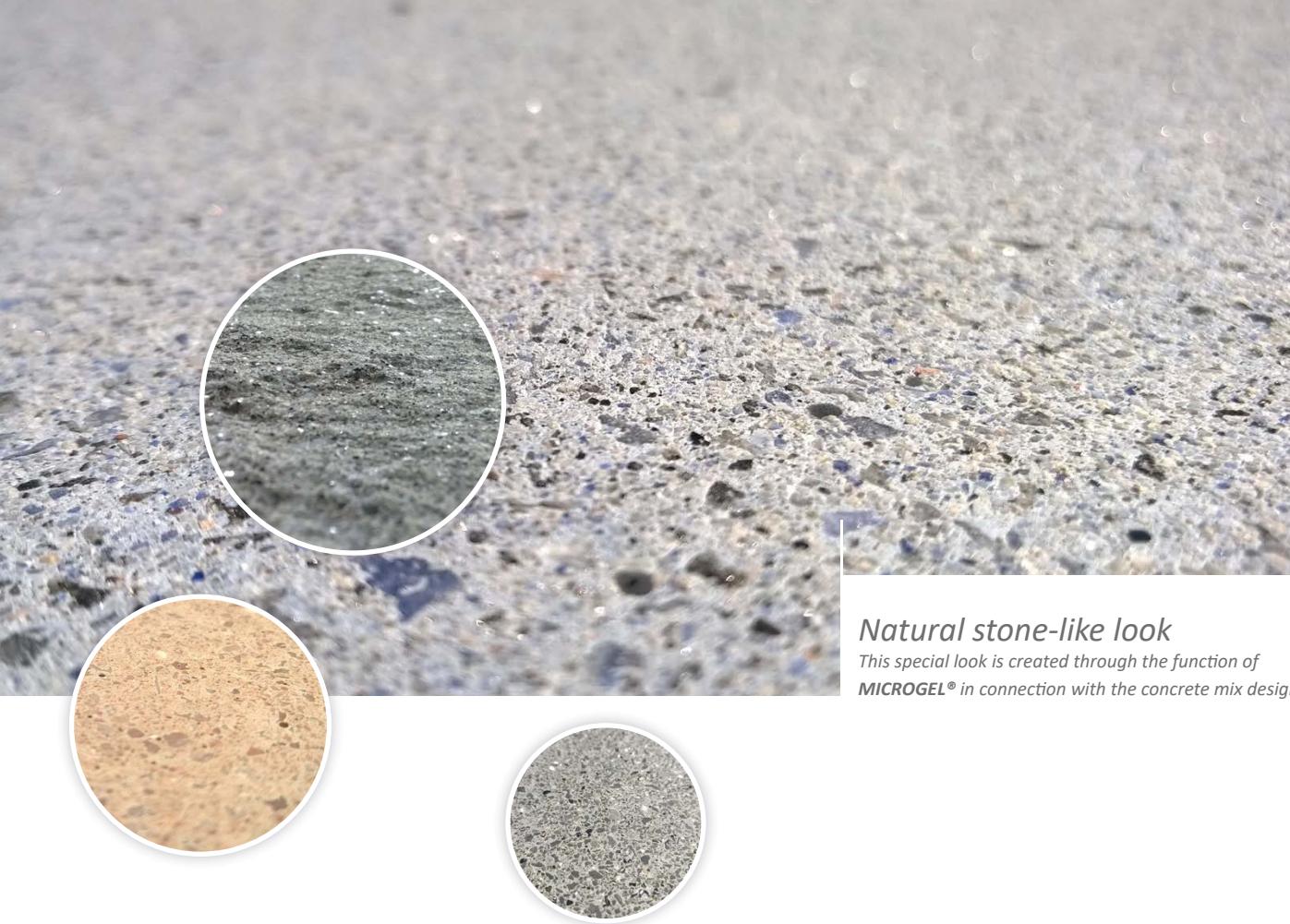


EAGs (ENGINEERED ACID GEL)
FOR THE PRODUCTION OF ACID-ETCHED CONCRETE SURFACES

MICROGEL®





Natural stone-like look

This special look is created through the function of **MICROGEL®** in connection with the concrete mix design

Skin peeling - can make concrete prettier, too

Does this sound familiar to you? – You open an architecture magazine and discover an article about concrete, but all you find are photographs of a more or less successful version of smooth, fair-faced concrete. It cannot be denied: the trend among architects of using concrete in a fair-faced, form-finished version is obvious. But there are so many other possibilities to create different and potentially more appealing concrete surfaces. Photos of different acid-etched concrete surfaces can be found in our [photo gallery](#).



left: „standard“ concrete surface
right: same concrete with acid-etched surface

One alternative, particularly popular with planners and manufacturers of precast concrete products, is so-called acid-etching. The result is a natural stone-like look and haptic and a surface which is hardly recognizable as concrete. And this is how it works: First you produce a smooth concrete surface (structured formwork is also possible). After demoulding the concrete surface is prepared by saturating with water, followed by the application of the **MICROGEL®**, a special acid-gel. The materials used have an acidic pH-value and react with the surface-near alkaline cement. This leads to a neutralization and so a micro-thin layer of the concrete surface can be removed via water-pressure and the sand/aggregate matrix underneath the concrete skin is revealed uniformly, giving the concrete surface a special look.

The depth of this acidification is approx. 0.3 mm and is therefore much less than the results which can be achieved e.g. by sand blasting.

Acid-etched concrete surfaces have following advantages:

- Natural stone-like look and haptic.
- Non-slip effect, because increased roughness can be produced this way, e.g. for prefabricated concrete steps or paving slabs.
- Long-term maintenance-free surface properties, as mainly durable aggregates can be found on the surface and less cement (approx. ratio: 60:40).
- Acid-etched concrete surfaces are an alternative to sandblasting and give a different "look", often considered as more sophisticated.
- Acid-etched concrete surfaces are an alternative to smooth, fair-faced concrete surfaces, because it is easier to achieve concrete surface colour uniformity.
- Acid-etched concrete surfaces are an alternative to natural stone slabs, because larger sizes are possible, for example in precast concrete wall panels.



From a chemical-concrete-technology point of view, many different acids could be applied for this function. But just as with vinegar or wine, not all acids are the same. **HEBAU** therefore offers only so-called Engineered Acid Gels (EAGs) under the brand name **MICROGEL®**. **MICROGEL® EAGs** combine functionality and the request for simple application. Further information can be found in the technical data sheet „[MICROGEL® Acid-Gel for the production of acid-etched concrete surfaces](#)“.

We offer 5 different **MICROGEL® versions**, in order to cater ideally for individual application requirements. Our technical consultants provide examples of suitable concrete mix designs ([Rosso-Verona](#) und [Ba-salt-Black](#)), give advices about the dos and don'ts, offer support during testing with samples, can give seminars to your staff ...

And we even thought about that, too:
The water which is used for the acid etching process usually does not require any special treatment.

Inquiry



member of:



Products for the production of acid-etched concrete surfaces

MICROGEL® version „spezial“	MICROGEL® version „forte“	MICROGEL® version „VO2“	MICROGEL® version „connect“	MICROGEL® version „free“
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Application characteristics:

			NEU!	NEU!
brushable	✓	✓	✓	✓
sprayable	✓	✓	✓	-
suitable for application on horizontal surfaces	✓	✓	✓	✓
suitable for application on vertical surfaces	✓	✓	✓✓	✓✓
suitable for precast concrete/cast stone	✓	✓	✓	✓
suitable for cast-in-place concrete			following pilot tests	

Requirements for best results:

surface pre-saturated with water	✓	✓	✓	✓	✓
age of concrete	unlimited	unlimited	unlimited	unlimited	limited
even distribution of aggregates in concrete surface	is always essential				

Characteristics of MICROGEL®:

effectiveness	standard	increased	increased	increased	standard
odour	odour-reduced	standard	standard	optimized	free of odour
reaction time	standard	optimized	optimized	optimized	standard
gel-like	✓	✓	✓	✓	✓
viscosity	standard	standard	increased	increased	standard

Fields of applications:

architectural & decorative concrete	✓	✓	✓	✓	✓
intensive cleaning of concrete	✓✓	✓	✓	✓	✓
slip-resistant (anti-slip) concrete surfaces	✓	✓	✓	✓	✓

Also recommended:

high performance mould release agent	WABICON HP	for best effectivness of MICROGEL® application
special admixture for decorative concrete	ARCON-Fluid^{Plus}	reduces segregations
protective coating option 1	COLORFRESH® intensiv	protects against efflorescence and weathering effects - can be used immediately after MICROGEL® application - creates a light shine and colour enhancement
protective coating option 2	COLORTEC® MAX	protects against efflorescence and weathering effects - can be used immediately after MICROGEL® application - remains invisible

Symbol explanation: ✓ applicable/suitable ✓✓ very applicable/suitable - not applicable/suitable

Please study our technical data sheets prior to application and always conduct pilot tests under real application and production parameters and a suitable observation time. Status 07/2020, All informations are subject to changes.



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