HEBAU

PRODUCTS FOR GOOD-LOOKING CONCRETE

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

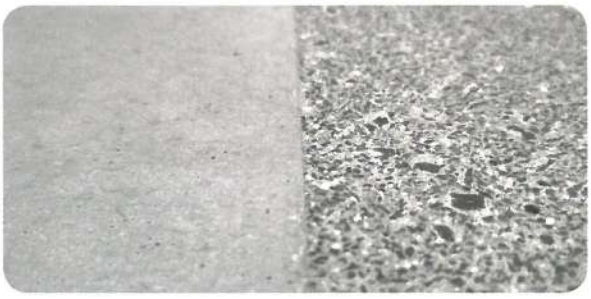
MICROGEL®

www.hebau.de

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.



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.

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, 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.

member of:

konstruktiv & kreativ

Betonwerkstein
Info-b Informationsgemeinschaft Betonwerkstein e.V.

Products for the production of acid-etched concrete surfaces

	MICROGEL® version „spezial"	MICROGEL® version „forte"	MICROGEL® version „V02"	MICROGEL® version „connect"	MICROGEL® version „free"
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.

HEBAU GmbH
products for good-looking concrete
www.hebau.de

mail@hebau.de
An der Eisenschmelze 13
D- 87527 Sonthofen

Tel : +49 8321-6736-0
Fax : +49 8321-6736-36