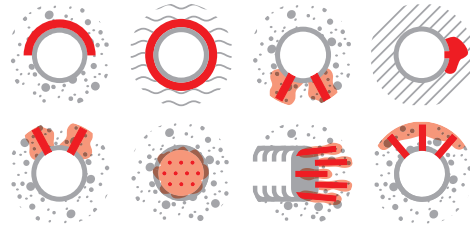


Consolidation Line

## WEBAC® HIS (Hybrid-Injection-System)



- ▶ Hybrid injection resin WEBAC® HIS is a reaction resin component used for the reinforcement / improvement of cement injections. It is, adjusted to the type of cement used, designed for early strengthening, stabilizing and sealing cement injections also in case of ingress of flowing water in engineering structures such as tunnels, dams or in mining.

### Range of application

- Stabilization of foundation pits and tunnel systems
  - Tunnel face consolidation and pre-injection, especially in front of TBMs, umbrella injection
  - Backfilling of annular gaps in tubings
  - Fast water stopping and sealing in case of water ingress
  - Replacement of washed-out soil and disintegrated rock mass
- Ground stabilization
  - Slope stabilization
  - Stabilization of unstable soil areas in earth- and damworks
- Stabilization measures using anchor systems
- Filling of cavities and voids
  - Consolidation of karst and unconsolidated rock, gravel and crushed rock layers

### Properties

- Reactive component for large-scale cement injections, adjustable to many types of cement
- Economical
- Fast strength development
- Suitable for cutting and planing
- Aquatic and terrestrial environmental compatibility (column experiment)
- Additional fire load negligible with high cement content

### Instructions for use

Component A and B are delivered through a 2C pump and pre-mixed in a special mixing head. The premixed material is added to the cement slurry injection stream at the required mixing ratio and is mixed homogeneously in a mixing tube incl. static mixer.

The product's strength and especially its strength development are largely influenced by the efficiency of the mixing element and the mixing ratio.

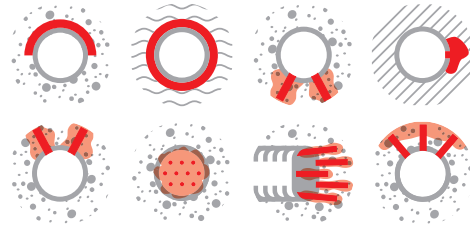
Cement slurry can additionally be adjusted by superplasticizer and dispersing agent.

## ▶ Technical Information

All the data indicated in this technical data sheet and any related information provided by our employees are of an advisory nature representing our current state of knowledge and in no way binding. As the exact chemical, technical and physical conditions of the actual application are beyond WEBAC's control, this information does not preclude examination of the products and/or procedures for the intended application and surface by the user. WEBAC is thus unable to guarantee results. The user is fully responsible for the observation of existing regulations and conditions when using the products.  
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Consolidation Line

## WEBAC® HIS (Hybrid-Injection-System)



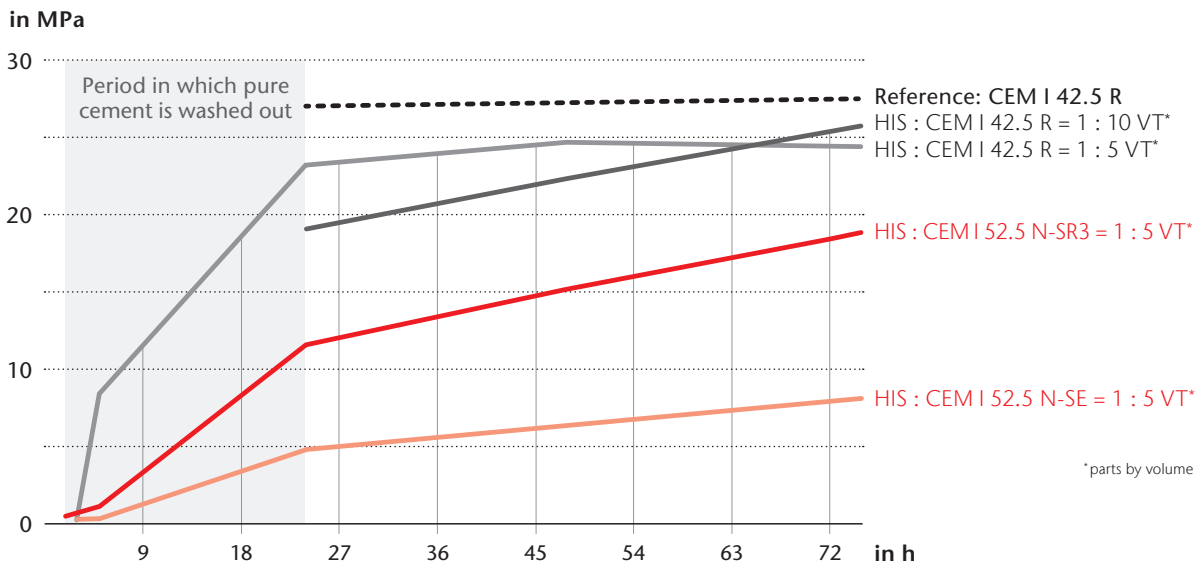
Technical parameters	Values	
Mixing ratio	1 : 1 parts by volume; 1 : 5 to 1 : 10 (possibly up to 1 : 15) parts by volume with cement slurry; approx. 1 : 10 to 1 : 20 parts by weight	
Density, 23 °C / 73 °F (ISO 2811)	Comp. A	≈ 1.0 g/cm <sup>3</sup>
	Comp. B	≈ 1.2 g/cm <sup>3</sup>
Viscosity, 23 °C / 73 °F	Comp. A	≈ 150 mPa·s
	Comp. B	≈ 250 mPa·s
Apparent density with cement (1 : 5 parts by volume)	≈ 1.7 kg/dm <sup>3</sup>	

The specified data are values determined under laboratory conditions and are subject to a certain fluctuation. Deviations are possible in practice depending on the respective object situation.

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### Early time compressive strength of WEBAC® HIS with different cement types



### Occupational safety and waste disposal



[webac-grouts.com/downloads](http://webac-grouts.com/downloads)

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