



# PRODUCT BULLETIN

## ALPHATEC 342

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### General Description

ALPHATEC® 342 is a two-component polymer grout injection system consisting of modified epoxy resin and chemical hardener. ALPHATEC® 342 is specially formulated for moisture tolerance, and shows exceptionally good bond to wet or submersed concrete. It is widely used for the repair of water-soaked concrete foundations for presses, rolling mills, and rails, as well as for the repair of underwater or immersed structural concrete.

### Features

1. Cures within 24 hours at 25°C
2. Fills cracks down to 0.02 mm
3. Good bond to damp or wet concrete
4. Injection by HP or LP methods

### Resin System Properties

	Liquid	Hardener	Mixed
Viscosity at 25° C (mPa.s/cP):	1000	150	560
Specific Gravity:	1.15	0.98	1.09
Mixing Ratio by weight:	100	42	
Mixing Ratio by volume:	2	1	
	Time	Temp	
Pot Life (min.) at T (°C):	40	25°C	
	60	15°C	
Gel Time (min.) at T (°C):	40	25°C	
	240	15°C	
Working Time (min.) mixed with aggregate:			
Shrinkage on cure:	negligible		

### Cured Properties

	SI Units MPa (GPa)	Metric kg/cm <sup>2</sup>	Imperial psi
Compressive strength (ASTM C579B):	71.1	725	10,300
Compressive modulus (ASTM C579B):	(2.3)	23,400	332,000
Compressive strength (ASTM C579B) @ 150°C:	58.8	600	8,500
Compressive strength (cured underwater):	80.0	815	11,600
Flexural strength (ASTM C580):	13.8	141	2,000
Flexural modulus (ASTM C580):			
Tensile bond strength (to steel):	16.4	167	2,300
Shear bond strength (to steel):	(Bond strengths cured in water are approximately 15% lower)		
Slant shear bond strength to concrete:			
Tensile bond strength to primed concrete:			
Coefficient of linear expansion (ASTM C531):			
Creep under load - 24 hrs:			
1 year:			
10 years:			

Creep testing is done with a constant load of 600 psi (4 MPa) @60°C

## Pictorial Information

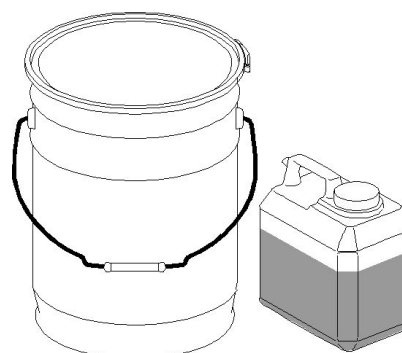
### Packaging and Safety

ALPHATEC 342 is available in 4.5 litre and 12 litre sets. In each case the liquid component is packaged in a container which allows for addition of the hardener, and space for mixing.

For large projects, the product can be packaged in drums; typically a 600 litre set consisting of 2 x 200 litre drums of epoxy liquid, and 1 x 200 litre drum of hardener.

All ALPHATEC products are intended for industrial use, and should be used only by experienced personnel with proper equipment & training. Always use proper protective clothing, including gloves, face masks or shields, and wash any exposed skin thoroughly after using the product.

See Safety Data Sheets for more information.



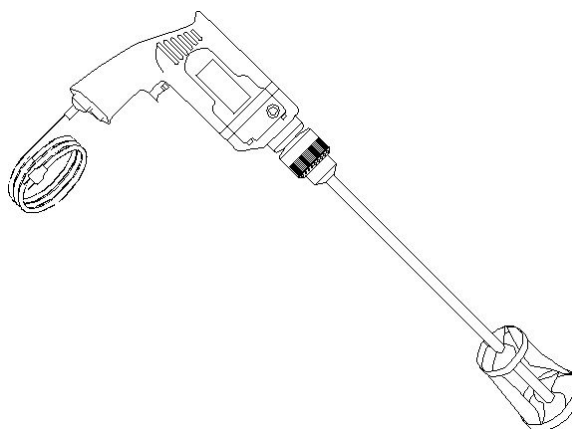
### Mixing and Handling

Mix the components together using a low-speed electric-powered or air-powered mixer for at least one minute.

The mixed material can then be poured into the injection pump hopper, and pumped into place.

If the volume required is small, the product can be measured out into a graduated beaker, using the ratio of 2 parts liquid to 1 part hardener by volume.

When temperatures are very high, it is advisable to use the smaller sets, or to measure out smaller quantities, to avoid premature curing in the container.



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