

DATA SHEET

Description	ultraSTOP™ is a cementitious, crystallising concrete waterproofer, the inorganic chemicals of which, penetrate into the substrate by diffusion and react with the free lime in the concrete forming insoluble crystals, sealing all paths of water penetration.
Uses	ultraSTOP™ is suitable for waterproofing concrete in many areas, including: <ul style="list-style-type: none"> • Retaining walls, basements and floor slabs. • Reservoirs, water tanks and sewerage plants, lift pits, sumps and planter boxes. • Bridge decks, viaducts and swimming pools.
Properties	The use of ultraSTOP™ is not detrimental to the compressive, tensile or flexural strengths of the concrete to which it is applied.
Features & Benefits	<ul style="list-style-type: none"> • Penetrates to seal existing and new cracks up to 300 microns • Can be applied to either the active or passive side • Protection not required • Non-toxic and can be used in contact with potable water • Requires minimal surface preparation • Protects reinforcement by preventing the intrusion of moisture, salts, chemicals and other harmful fluids • Allows the concrete to breathe • Cannot be torn or perforated • Improves chemical resistance • Easily applied
Chemical Process	ultraSTOP™ reacts with the free lime and moisture in concrete, forming insoluble crystal complexes in the capillary tracts and fine shrinkage cracks within the structure. ultraSTOP™ achieves a permanent waterproof seal on all sound mineral surfaces against moisture and ground water. Once the crystals have formed, they remain permanently and further contact with water will reactivate the process of sealing.
Application	
Surface Preparation	All surfaces should be washed with a high pressure water jet at a pressure of at least 100 bar to ensure thorough scouring and pre-wetting of the concrete. By removing all scale, form oil, grease, laitance etc. an open capillary system is produced, allowing the ultraSTOP™ chemical process to take place. Precast concrete requires at least 200 bar. ultraSTOP™ should not be applied to an extremely smooth surface.
Mixing	ultraSTOP™ is mixed with clean water at the rate of 10-12 litres per 25kg bag. Using a slow speed electric mixer, ensure that the slurry is free of lumps.
Application	<p>ultraSTOP™ is applied by special brush or spray equipment to thoroughly cleaned and saturated surfaces at the rates shown below,</p> <ul style="list-style-type: none"> • Floor Slabs and construction joints 1.00 kg/m² in one application • Walls 0.75 kg/m² in one application • Structures with render 0.75 kg/m² in one application 1.00 kg/m² in one application <p>Dry film thickness @ 0.75 kg/m² = 0.45mm</p> <p>ultraSTOP™ should not be applied if the temperature is likely to fall below 5°C during or within 24 hours of application. Initial set of ultraSTOP™ at 30°C is 60-90 minutes. At 10°C it will require 180 minutes.</p>

Application to lean concrete should allow sufficient time for the ultraSTOP™ to achieve initial set before placing the concrete. Oil based formwork release agents are not to be used, as this will affect the bonding of ultraSTOP™ to the concrete.

Curing Surfaces treated with ultraSTOP™ and left exposed are to be kept damp for at least 3 days after application. This can be achieved by periodically spraying with water or by covering the surface with polythene sheets, wet sand or gunny sacks. Backfilling with moist soil may commence 26 hours after application.

Decoration ultraSTOP™ allows concrete to breathe and thus the transmission of water vapour. Therefore, vinyl tiles, parquet flooring or oil based coatings must NOT be used in conjunction with ultraSTOP™. Where marble or granite finishes are to be used, the unpolished surfaces should be treated with acrylic sealer. Surfaces treated with ultraSTOP™ to be painted, should be neutralised with 10% hydrochloric acid and thoroughly washed off with water before painting.

Technical Data

Pot Life		>=	3 hours
Bending strength	after 2 days	>=	5 N/mm ²
	after 28 days	>=	22 N/mm ²
Compressive strength	after 2 days	>=	7 N/mm ²
	28 days	>=	50 N/mm ²
u-value		<=	100
Chloride content		<=	0.002%
Dynam, E-modulus	after 90 days	<=	3000 N/mm ²
Adhesion strength ASTM D903		>=	3 N/mm ²
Water impermeability at a water pressure DIN 1048			
a) of 15m head of water (for 28 days)			Impermeable
b) of 70m head of water (for 24 hours)			Impermeable
Tensile strength ASTM D412			1.8 Mpa
Moisture vapour transmission			0.8 g/m ² /h
Water absorption			5%
Waterproof to pressure			2 Mpa
Permanent ultimate elongation ASTM D412			1%

Packaging ultraSTOP™ is packed in 25kg heat-sealed plastic bags with a plastic inner liner. Store product in original sealed container, in a dry place. Not frost sensitive. Shelf-life is up to 12 months.

Precautions As with all cementitious products, ultraSTOP™ has high alkali content and therefore skin protection is recommended ultraSTOP™ should be washed off immediately with clean water and rubber gloves should be worn. Refer to the safety data sheet for more details.

Contact Details

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