

Expancote* HT120

Solvent free, novel resin coating, resistant to temperatures up to 120°C

Uses

Protective coating for concrete and steel used for high temperature service conditions up to 120°C. It is particularly useful to resist boiling water under continuous or partial service conditions in areas like:

- Power stations, water treatment plants
- Food processing plants
- Food manufacturing plants
- Desalination plants, hot water storage tanks

Advantages

- Resistant to boiling water under continuous service conditions
- Resistant to thermal shocks and freeze-thaw cycles
- Abrasion and corrosion resistant
- Resistant to sea water
- Can be applied directly on prepared substrate without using a primer
- High build application
- Smooth, glossy, easy to clean surface
- Low cost service life - resistant to mould growth
- Easy to apply, solvent free formulation makes it suitable for use in confined spaces

Description

Expancote* HT120 is a two pack, solvent free, resin material. It is supplied in pre-measured quantities ready for site mixing and use. The material cures to provide a smooth, tough and resistant finish. It is available in dark grey colour.

Design criteria

Expancote* HT120 is designed to be applied in two coats to achieve a minimum total dry film thickness of 400 microns. To achieve the correct protective properties, Expancote* HT120 must be applied on to the substrate at the coverage rates recommended.

Properties

Solids by weight	: 100%	
Specific gravity	: approx. 1.55 (mixed)	
Pot life	: 180 mins	@ 23°C
	: 90 mins	@ 35°C
	: 40 mins	@ 45°C
Drying time	@ 23°C	@ 35°C
Touch dry	: 6-8 hours	3 hours
Re-coatable	: 8-20 hours	4-14 hours
Full cure	: 7 days	4 days

Bond strength after 600 hours water boil

ASTM D4541 : 4.5 N/mm² concrete failure

Physical effects after

600 hours water boil : No cracking, chalking, softening, blistering or de-bonding

Chemical resistance :

Alkalis

Sodium hydroxide (sat.): Excellent

Aqueous solutions

Chlorinated water	: Excellent
Tap water	: Excellent
Distilled water	: Excellent
Sea water	: Excellent
Sugar solution (sat.)	: Excellent
Glucose syrup (80%)	: Excellent
Salt solution (sat.)	: Excellent
Starch solution	: Excellent

Others

Sewage water	: Excellent
Marsh water	: Excellent

Please consult your local Expanchem Fospak office for details on various chemicals and operating conditions.



CONSTRUCTION CHEMISTRY

Instructions for use

Preparation

Concrete surfaces

All surfaces must be smooth, sound and free from debris, loose or flaking material and areas of standing water. Surfaces must be free from contamination such as oil, grease and organic growth. Concrete surfaces must be fully cured, laitance free and free from any traces of shutter release oils and curing compounds.

To achieve the above it is recommended that the substrate should be grit blasted which will also provide a suitable key for Expancote* HT120.

All blow holes and imperfections should be filled with Expanmortar* FC or Expanmortar* FC(B). Consult the local data sheet for pot life and overcoating time.

Steel surfaces

All surfaces should be grit blasted to meet the requirements of BS 4232, First Quality. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Mixing

The contents of the base can should be stirred thoroughly to disperse any settlement. The entire contents of the hardener can should be added to the base container and mixed thoroughly until a uniform consistency is obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed, using a Expanchem Mixing Paddle on a heavy duty, slow speed electric drill. Mixing should be carried out continuously for a minimum of 3 minutes.

Application

The minimum application temperature is 5°C.

All surfaces should be treated with two coats of Expancote* HT120.

The thoroughly mixed material should be applied with a suitable brush, roller or spray.

The first coat must be firmly applied and be well scrubbed into the surface, ensuring a uniform coating with a wet film thickness not less than 200 microns. The first coat should be allowed to dry for not less than 3 hours and not more than 14 hours at 35°C.

The second coat should be applied exactly as above, again achieving a wet film thickness not less than 200 microns.

For cold weather working, it is recommended that Expancote*HT120 be stored in a heated building and removed immediately before use, as workability deteriorates and curing times increase at lower temperatures.

Cleaning

Expancote* HT120 should be removed from tools and equipment with Expanchem Fospak Solvent 102 immediately after use. Cured material can only be removed mechanically.

Limitations

- Expancote* HT120 is formulated for application to clean, sound concrete and steel.
- Expancote* HT120 should not be applied over existing coatings.
- Application should not be undertaken if the temperature is below 5°C, or is 5°C and falling.
- In conditions of high relative humidity i.e. 85-90% good ventilation conditions are essential. Substrate temperature should be at least 3°C above dew point.
- Although Expancote* HT120 may be applied to damp concrete, there must be no standing or running water.
- Expancote* HT120 is not colour stable when exposed to direct sunlight or when in contact with some chemicals such as acids and oxidising agents.

Technical support

Expanchem Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on- site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.



CONSTRUCTION CHEMISTRY

Estimating

Supply

Expancote* HT120 : 2.50 Kg. Pack

Expanchem Solvent 102 : 5 Ltr. Can

Coverage

Expancote* HT120 : 3.75 m²/Kg.
@ 200 microns wft per coat

Note: The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may be substantially reduced.

Storage

Shelf life

All products have a shelf life of 12 months if kept in a dry, air conditioned store between 5°C and 30°C in the original, unopened containers.

Storage conditions

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures the shelf life will be reduced. Air conditioned storage at high ambient temperatures is recommended.

Precautions

Health and safety

Expancote* HT120 and Expanchem Solvent 102 should not come in contact with the skin and eyes, or be swallowed. When using Expanchem Solvent 102 ensure adequate ventilation and avoid inhalation of vapour. Some people are sensitive to resins, hardeners and solvent.

Wear suitable protective clothing, gloves and eye protection. The use of barrier creams provides additional skin protection.

In case of contact with the skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately – do not induce vomiting.

Fire

Expancote* HT120 is non-flammable.

Expanchem Solvent 102 is flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

Flash point

Expanchem Solvent 102 : 33°C

For further information, refer to the Product Material Safety Data Sheet.

Additional Information

Expanchem Fospak manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Expanchem Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Expanchem Fospak's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Expanchem Fospak office - as below.



CONSTRUCTION CHEMISTRY

* Denotes the trademark registered.

REGIONAL SALES OFFICES IN PAKISTAN:

Fospak (Pvt) Ltd.

Head Office

702, Business Avenue,
Block-6, PECHS., Shakra-e-Faisal,
Karachi, Pakistan.

Tel # +92-21-34528477, 34529859

Fax # +92-21-34522436

Email : info.khi@fospak.com.pk

Lahore Sales Office

2nd Floor Sarwar Shaheed Plaza,
Cavalry Ground,
Main Boulevard, Lahore Cantt,
Lahore, Pakistan.

Tel # +92-42-36675773

Fax # +92-42-36675838

Email : info.lhr@fospak.com.pk

Rawalpindi Sales Office

1st Floor,
Al-Harmain Plaza,
Main Murree Road,
Rawalpindi, Pakistan.

Tel # +92-51-9290592

Fax # +92-51-9290590

Email : info.isb@fospak.com.pk

Important note

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