

CONCRESE[®] 1418

Fast setting, High strength polyester resin anchor grout & repair mortar

Description

CONCRESE 1418 is a two-component polyester resin compound consisting of a liquid resin and a powdered hardener filler system in one container. CONCRESE 1418 is available in two consistencies – Flowable (N) and Trowellable (T). CONCRESE 1418 N is used for resin anchor grouting in horizontal and inclined position while CONCRESE 1418 (T) is preferred for trowel applied patch repairs and as thixotropic resin anchor grout for vertical and overhead situations.

Uses

CONCRESE 1418 N:

- For horizontal and inclined applications
- Grouting high strength anchor bolts and starter bars in concrete
- Grouting anchors in rock
- Light and heavy rail-track anchoring
- Setting highway lighting stands
- Anchoring pre-cast median barriers and signs on highways
- Handrail and guardrail installation
- Pipe protection stands around safety areas in factories

CONCRESE 1418 T:

- For vertical and overhead applications
- Grouting short anchor bolts and starter bars
- Grouting deformed anchor bolt stock
- Setting alignment jacking pads on large equipment bases
- Free-formed shims under base plates
- Repair of pre-cast concrete units
- Repair of worn or damaged concrete.
- Bedding and sealing concrete units, steelwork, road furniture, etc.
- Fixing tiles, slabs, pre-cast facings, etc.

Advantages

- Small amount mixable in the field – low wastage
- Fast setting – Puts anchors in to service fast
- High strength – Permanently anchors rails & bars
- Bonds to both concrete & steel – versatile
- Polyester chemistry – resistant to many chemicals
- Will cure underwater and at low temperatures
- Extra fillers can be loaded for bulk filling
- Thixotropic grade suited for overhead applications
- Low shrinkage formulations
- Does not require priming
- Available in small, ready to use packing
- High HDT, serviceable up to 120 °C

Typical Properties

Type/Grade	Flowable (N)	Trowellable (T)
Mix Density, kg/litre	: 1.82	2.02
Mixing Ratio (Base: Powder), by wt.:	27:73	18:82
Setting Time,	at 15°C : 120 min	90 min
	at 20°C : 60 min	50 min
	at 25°C : 30 min	20 min
	at 35°C : 17 min	14 min
Compressive Strength,	at 3 hr. : 20 MPa	41 MPa
	at 7 days : 40 MPa	48 MPa
Adhesive bond strength (ASTM D 4541)	: > 2 MPa	(Concrete failure)

Chemical Resistance

CONCRESE1418 resists many chemicals such as:

- Sugar syrup
- Fresh & salt water
- Sewage water
- Dairy products
- Mineral and vegetable oils
- Petrol, diesel, other hydrocarbons
- Mild acids and alkali

Specification Clause

The polyester resin grout/mortar shall be CONCRESE 1418, a two-component, fast-setting, high-strength, ready to use formulation. The product shall exhibit fast-setting with high early strength gains and shall be minimum 20 MPa in compressive strength with in 3 hours and shall have adhesion to concrete in excess of 2 MPa at 7 days when tested as per ASTM D4541 standards. The product must be based on polyester resin chemistry and free from volatile matter and offer high resistance to common chemicals. The product shall exhibit ability to set in moist and underwater environment and shall harden even in low temperatures.

Directions for use

Surface preparation

Concrete should be clean, dry, sound, and fully cured a minimum of 28 days before application.

In hot weather conditions, pre-condition CONCRESE 1418 at 21°C for at least 24 hours before use to obtain extended working life.

Resin anchor applications: Drill anchor bolt holes using air or water flushed rotary percussive drilling equipment. If diamond core or non-percussive drills are used, the hole must be thoroughly scoured using a

stiff-bristled brush. Blow the cavity clean with oil-free compressed air.

Anchor bolt holes less than 100 cm deep should not be more than 12mm larger in diameter than the diameter of the anchor bolts.

Patch repair applications: Ensure surfaces are free from oil, grease, paint, curing compound, etc. remove dust laitance and friable materials by wire brushing, bush hammering or acid etching. It is preferable to abrade and roughen smooth surfaces prior to application of CONCREACTIVE 1418.

Mixing

Pour of resin into a clean plastic bucket and add powder filler stirring continuously until desired consistency is reached and the mixture is smooth, lump free and uniform in colour.

Do not mix more material than can be used within 20 minutes.

Application

Resin anchor applications: Place CONCREACTIVE 1418 into prepared hole ensuring that no air is trapped. Insert the bolt or bar with a twisting action for maximum contact between the resin compound and anchor.

Patch repair applications: CONCREACTIVE 1418 should not be applied in coats thicker than 20mm. Where repairs are to be above 20mm, it is preferable to apply CONCREACTIVE 1418 in layers each with a maximum thickness of 20mm. Apply successive coats after the previous coats have hardened.

When using material of flowable consistency, ensure material is given time to settle and self-level before proceeding. When using material of trowellable consistency work it well into the surface to be prepared. Build up layers ensuring good contact and adhesion between coats. Finishing is best effected by applying a little hydrocarbon solvent, to the trowel. Use clean smooth tools.

Coat thickness depends on location and substrate. A general guide is up to 20mm on horizontal applications, 12mm on vertical applications and 4-6mm per coat on soffits.

Packaging

CONCREACTIVE 1418 is available in 1 & 4 kg pack.

Coverage

CONCREACTIVE 1418 N – 2.2 Litre/ 4 Kg pack

CONCREACTIVE 1418 T – 2 Litre/ 4 Kg pack

Equipment care

Clean all equipment with SOLVENT NO. 2 before it set. Cured material must be mechanically removed.

Storage and Shelf life

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf life is 3 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice please consult BASF's Technical Services Department.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

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BASF India Limited

Construction Chemicals Division

Plot No.37, Chandivali Farm Road, Chandivali ,Andheri(East)

Mumbai – 400072 India

Tel: +91 22 28580200, Fax: +91 22 28478381

e-mail: basfcc@vsnl.net www.basf-cc.co.in

