



## Description:

TechnoCrete® AF100 is a multi-component, chloride free liquid antifreeze admixture and water-reducing accelerator used for protecting concrete from frost under low temperature by fast curing properties. TechnoCrete® AF100 promotes higher early and ultimate strengths; especially in concrete exposed to temperatures below freezing. Concrete placed in colder weather with TechnoCrete® AF100 is able to maintain normal set times without the introduction of chloride-bearing components.

## Usage:

- Cold weather concreting
- Structural and plain concrete
- Precast and post tensioned concrete
- Can be used year round for higher and earlier strength gain
- Concrete bridge decks and Prestressed concrete repair
- Prestressed concrete and concrete over metal decking and roof systems

## Features & Benefits:

- Reduces initial set 1 to 6 hours depending on concrete temperatures
- Cuts construction costs - concrete placing cycle is accelerated
- Improves workability and provides denser concrete
- Minimizes bleeding and segregation
- Improves compressive strength development at early ages
- Decreases overtime allowing same day finishing
- Aids in prevention of concrete from freezing at higher dosages
- Improves cohesiveness and plasticity which aids in avoiding honeycombing
- Increases early and ultimate compressive and flexural strengths

## Directions for use:

TechnoCrete® AF100, is added to the gauging water as per the specified dosage % by weight of cement at the plant or added on the site into the concrete mixer. For getting homogenous distribution in concrete or mortar, it must be stirred fast during 1-2 minutes. When added separately to the freshly mixed concrete, further mixing should take place for at least 3 minutes. Before being discharged, the concrete must be visually inspected for even consistency.

## Dosage:

TechnoCrete® AF100 is typically used at dosages of 650 to 5870 mL per 100 kg of cementitious material. Higher dosages are acceptable with prior testing and confirmation of the desired performance with specific materials being used. TechnoCrete® AF100 should be added to the initial batch water of the concrete mixture. Do not dispense onto dry cement. For ambient temperatures below 10°C follow ACI 306 Cold Weather Requirements. If conditions exist that require freeze resistant concrete systems using Techno Builders Solutions® range of admixtures, contact STIPL's sales representative for proper recommendations.

## Typical Properties at 20°C:

Chemical Base	Liquid
Appearance	Light brown or Pale Yellow liquid
Density	1.1-1.2 kg/l at 20°C
pH Value	3.5 – 5.5
FreezingPoint	-15°C
Chloride content	chloride-free

## Standards:

TechnoCrete® AF100 complies with the requirements of Specification for Chemical Admixture for Concrete ASTM C 494 as a Type C.

## Packaging:

TechnoCrete® AF100 is supplied in 225 Kg plastic container.

## Storage & Shelf Life:

Shelf life is 18 months from production date if stored in original, unopened packaging, at temperatures between -10°C and +35°C. If it is stored at very low temperatures, crystals of the active ingredient may be formed at the bottom of the container. Before use, the admixture must re-obtain a positive temperature and be slightly stirred, until it is homogenized.

## Compatibility:

TechnoCrete® AF100 is compatible with all types of Portland cement & cement replacement materials, class C and F, fly ash, silica fume, fibers. TechnoCrete® AF100 should not be used in conjunction on with other admixtures unless STIPL's Technical Department approval is obtained

## Cleaning:

TechnoCrete® AF100 spillage should be collected by a suitable absorbent such as sand or vermiculite and transferred by a suitable container. TechnoCrete® AF100 should not be allowed to enter sewers or open bodies of water. Dispose in accordance with local environmental regulations.

## Precautions/Limitations:

Specific local regulations concerning production and placing of concrete have to be followed. Concrete components (aggregates, water, cement) must be at temperatures higher than 0°C. Avoid adding water for better workability, keeping the water to cement ratio as low as possible. ConFlow® SPL-concrete superplasticizer can be used in parallel. The surface of concrete must be protected during setting with plastic sheets or other available materials to reduce hydration heat losses.

## Health and Safety instructions:

TechnoCrete® AF100 is classified as a hazardous material. TechnoCrete® AF100 should not come into contact with skin and eyes. In case of contact with eyes, immediately flush with plenty of water and seek medical attention. For further information, refer to the Material Safety Data Sheet.

**Additional Information:** Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

\*Separate datasheet are available on these products.

**Disclaimer:** The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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