Chemical construction (fosroc)

Auramix

A High Performance PCE-based Admixture for a Broad Variety of Concrete Grades: Fosroc Auramix 200 High-performance super plasticizer Fosroc Auramix 200 offers both low-grade and high-grade concrete a number of benefits. Auramix 200 was created for applications requiring great water reduction and long workability retention. It is utilised in pumpable concrete with long workability retention. The product is made by Fosroc Chemicals India Private Limited, and Space Arc Engineering, who is the company's authorised distributor for the entire Fosroc line of goods, markets and supplies it in India.

Key Details on Fosroc Auramix

Auramix 800

- **Type:** High-efficiency superplasticiser based on modified polycarboxylate polymer.
- **Main Use:** Production of self-compacting concrete (SCC), flow concrete, or high-strength concrete requiring low water content.
- **Classification:** EN 934-2:T3.1/3.2 – High range water-reducing/super plasticising admixture.
- **Advantages:**
  - Water reduction up to **40%**.
  - Enhances cement dispersion and robustness against water variation.
  - Prevents risk of post-plasticization.

Auramix 200

- **Type:** High-performance liquid admixture.
- **Application:** Ready-mix, precast, and high-strength concrete.
- **Benefits:**
  - Improves **workability and pumpability** without extra water.
  - Reduces **bleeding, segregation, and shrinkage**.
  - Enhances **strength, durability, and surface finish**.
  - Compatible with most cement types
- **Packaging:** Typically available in **200L drums**.
- **Service Life:** Around **3 years**.

Comparative Snapshot

Feature	Auramix 800	Auramix 200
Base	Polycarboxylate polymer	Acrylic liquid admixture
Primary Use	SCC, flow concrete, high-strength	Ready-mix, precast, high-strength
Water Reduction	Up to 40%	Improves workability without extra water
Key Benefits	Robustness, cement dispersion, prevents post-plasticization	Reduces bleeding, shrinkage, improves durability
Packaging	Datasheet available from Fosroc	200L drums
Service Life	Not specified	~3 years

Main Uses

- Appropriate for both low-grade and high-grade concrete
- Suitable for circumstances requiring significant water reduction and prolonged workability retention.
- Designed for usage in pumpable concrete and lengthy workability retention
- Advantages:
- The various concrete grades can be pumped to larger heights with the help of this low-viscosity additive.
- Appropriate for concrete with low water cement ratio and cement substitutes
- More strength is provided without a rise in cement content or a loss of workability.
- ideal for the manufacturing of precast concrete
- Reduces the typical rate of workability degradation brought on by superplasticizers.
- decreases shrinkage cracking because the water-to-cement ratio is lower.
- renders the concrete water-resistant
- improved carbonation resistance
- Reduces Creep and Shrinkage
- increases toughness

Standard Compliance:

Auramix 200 complies with ASTM C 494 Type G , BS:5075 , and IS:9103 as a water reducing and retarding type . Auramix 200 is a novel blend of a long lateral chain polycarboxilic ether polymer and a new generation super plasticizer . The light brown liquid that makes up Auramix 200 is easily dissolved in water . The amount of water required in flowable concrete is greatly reduced thanks to an electrostatic dispersion

mechanism . This increases the surface area exposed to the hydration process and improves the cement particles' ability to disperse throughout the mixture. This effect can be employed to make concrete that is highly workable, stronger, or with less cement.

Technical Support: Fosroc provides on - site help and advice about mix design, as well as the best dosage assessment of trials, through its technical advisory service.

Properties:

- A light brown liquid, in appearance
- pH: at least 6.0
- 1.07 0.02 kg / liter of volumetric mass at 250°C
- Chloride content is 0 according to BS 5075.

Dosage: Laboratory and batch trials should always be used to establish the best Auramix 200 dosage to satisfy a particular need. The typical dosage, however, falls within the weight range of 0.3 to 1.5 percent of the total cement or binder content.

Dose Exceeding Limits: With the assistance of Fosroc's technical department, dosage above the advised maximum might be used to meet certain blend needs.

Effects of Overdosage: Overdosage may cause segregation and setting delays .

Estimating : Auramix 200 is packaged in 240kg and 250kg drums as well as bulk tankers.

Storage: When kept in a temperature range of 20°C to 50°C, Auramix 200 has a minimum shelf life of 12 months. Safety and health precautions Advice: According to current standards, auramix 200 is not categorised as dangerous. Avoid getting it in your mouth, eyes, or on your skin nevertheless. Gloves and safety glasses are required, and splashes on the skin should be cleaned off with water. If the substance gets in your eyes, immediately seek medical assistance and thoroughly rinse them with water. Do not induce vomiting if swallowed; instead, immediately seek medical treatment.

Conbextra GP2

Conbextra GP2 from Fosroc is a high-strength, free-flowing, non-shrink cementitious precision grout, widely used for grouting base plates of heavy machinery, turbines, compressors, and anchoring fixings where durability and load-bearing reliability are critical. Conbextra GP2 is a blend of Portland cement, graded fillers and chemical additives which impart controlled expansion in the plastic state whilst minimising water demand. The low water demand ensures high early strength. The graded fillers are designed to assist uniform mixing and produce a consistent grout.

🔑 Key Description

- **Form:** Ready-to-use dry powder.
- **Mixing:** Add controlled clean water → produces a **free-flowing, non-shrink grout**.
- **Gap Thickness:** Suitable for **10mm to 100mm**.
- **Composition:** Blend of **Portland cement, graded fillers, and chemical additives**.
- **Expansion System:** Gaseous expansion compensates for shrinkage and settlement in the plastic state.

🏵 Main Uses

- Grouting **base plates** of turbines, compressors, boiler feed pumps, stanchions, and heavy machinery.
- Anchoring a wide range of **fixings** (masts, anchor bolts, structural supports).
- Applications requiring **static and dynamic load resistance**.

☑ Advantages

- **Non-shrink:** Ensures full contact with load-bearing surfaces.
- **High early strength:** Achieved without chlorides.
- **Ultimate strength & durability:** Long-term performance under heavy loads.
- **Low water demand:** Improves consistency and reduces risk of segregation.
- **No metallic iron:** Prevents staining.
- **Pre-packed:** Eliminates onsite batching variations.

Feature	Conbextra GP2
Type	Cementitious precision grout
Gap Thickness	10mm – 100mm
Flowability	Free-flowing, non-shrink
Strength	High early & ultimate strength
Expansion System	Gaseous expansion (plastic state)
Applications	Base plates, turbines, compressors, anchor bolts
Durability	Long-term, chloride-free, non-staining

Nitoflor Hardtop Standard

Nitoflor Hardtop Standard from Fosroc is a non-metallic, monolithic surface hardening compound applied to fresh concrete floors using the dry shake-on method, providing a highly abrasion-resistant, durable surface ideal for heavy-duty industrial areas.

🔑 Key Description

- **Form:** Factory-blended, ready-to-use powder.
- **Application Method:** Dry shake-on to fresh concrete → bonds monolithically with base concrete.
- **Composition:** Portland cement + specially selected hardwearing aggregates + chemical additives.
- **Finish:** Produces a dense, abrasion-resistant surface resistant to oils and grease.

🏵 Main Uses

- **Industrial floors** subject to heavy traffic: loading bays, trucking lanes, car parks, workshops, machine shops, ramps, spillways.
- **Heavy-duty environments:** Power stations, warehouses, abattoirs, agricultural buildings, distillation plants, laboratories.

☑ Advantages

- **Non-metallic:** Will not rust or stain when wet.
- **Abrasion resistance:** Provides a hard, durable surface against wear.
- **Monolithic bond:** Integrates with base concrete for long-term performance.
- **Chemical resistance:** Dense surface resists oils and grease.
- **Ease of application:** Supplied ready-to-use, economical, no additives required.
- **Aesthetic flexibility:** Available in a range of colours to improve working

Feature	Nitoflor Hardtop Standard
Type	Non-metallic surface hardener
Application	Dry shake-on to fresh concrete
Bonding	Monolithic with base concrete
Abrasion Resistance	High, suitable for heavy traffic
Chemical Resistance	Resistant to oils and grease
Rust/Stain Risk	None (non-metallic aggregates)
Colour Options	Multiple, improves environment

Nitobond EP

Nitobond EP from Fosroc is a two-component epoxy bonding agent designed to provide excellent adhesion between old and new concrete, ensuring durable, impermeable, and high-strength structural repairs.

🔑 Key Description

- **Type:** Epoxy-based bonding agent.
- **Components:** Two-part system (resin + hardener).
- **Form:** Gel-like consistency, transparent in appearance.
- **Bond Strength:** Above **30 MPa**.
- **Temperature Resistance:** Up to **80°C**.
- **Cure Time:** Approx. **30 minutes**.

⚙️ Main Uses

- **Structural repair:** Bonds fresh concrete/mortar to hardened concrete.
- **Concrete resurfacing:** Ensures monolithic adhesion for overlays.
- **Anchoring applications:** Fixings, patch repairs, and strengthening works.
- **Waterproof bonding:** Creates a non-shrink, impermeable interface resistant to water penetration.

☑️ Advantages

- **High adhesion:** Strong bond between old and new concrete.
- **Durability:** Improves tensile and flexural strength of repair mortars.
- **Water resistance:** Prevents ingress, enhancing long-term performance.
- **Non-shrink:** Maintains integrity under load.
- **Ease of use:** Supplied in pre-measured packs for consistent mixing.
- **Versatility:** Suitable for structural repair, resurfacing, and bonding applications.

Feature	Nitobond EP
Type	Two-component epoxy bonding agent
Bond Strength	>30 MPa
Cure Time	~30 minutes
Temperature Resistance	Up to 80°C
Form	Gel, transparent
Applications	Structural repair, resurfacing, anchoring
Durability	Non-shrink, impermeable, water-resistant

Reebol

Fosroc Reebol is a **ready-to-use mould release agent** supplied in liquid form, commonly packed in **20-litre containers**. It is used to prevent freshly placed concrete from sticking to formwork, ensuring a clean, smooth finish and easy stripping of shutters.

🔑 Key Description

- **Type:** Chemical mould release agent.
- **Form:** Ready-to-use liquid.
- **Application:** Applied to formwork before pouring concrete**.**
- **Function:** Prevents adhesion between concrete and formwork.

🏵 Main Uses

- Facilitates easy stripping of formwork in construction.
- Provides clean, stain-free concrete surfaces.
- Extends the life of formwork/moulds by reducing wear and tear.
- Used in precast yards, site formwork, and large-scale concrete pours.

☑ Advantages

- **Improved finish:** Produces smooth, blemish-free concrete surfaces.
- **Economical**: Reduces labour and cleaning costs.
- **Durability**: Protects formwork, increasing reuse cycles.
- **Ease of application**: Supplied ready-to-use, no dilution required.
- **Versatility**: Suitable for timber, steel, and plastic moulds.

🏵 Suitable For

- Steel formwork
- Timber / plywood shutters
- Plastic and fiberglass moulds
- Precast concrete moulds
- In-situ concrete construction
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Feature	Reebol
Type	Chemical release agent
Application	Applied to formwork before casting
Surface Finish	Smooth, stain-free concrete
Formwork Protection	Extends life, reduces wear
Ease of Use	Ready-to-use liquid
Compatibility	Timber, steel, plastic moulds