FORSPEC PROTECTIVE COATINGS

FORSPEC FIBRE X.



Technical Data Sheet | **Alkali-Resistant Fibreglass Reinforcement FIBRE for Screeds, Mortars and Cementitious Mixes** | **Issue date: 25 August 2026**

Description

FORSPEC FIBRE X is a high-performance alkali-resistant fibreglass reinforcement fibre for cementitious screeds, mortars, renders and concrete toppings. It is added dry at batching and disperses through the wet mix to form a continuous three-dimensional network of filaments distributed through the full depth of the section, rather than at the single plane a mesh sheet occupies.

The network works at the moment cracking begins. Plastic shrinkage cracks initiate while the mix is still green and gaining strength, before conventional reinforcement is carrying any load; the filaments intercept those micro-cracks as they form and arrest their propagation, holding the matrix together until it can carry itself. The glass chemistry is what allows the fibre to keep doing this: a cement matrix is strongly alkaline and attacks ordinary glass over time, so the alkali-resistant formulation is what preserves the reinforcement across the service life rather than only through the first weeks. Being glass, the fibre is also non-corrosive, so unlike steel it can sit at shallow cover and in permanently wet screeds without staining or spalling risk.

Advantages

- Alkali resistant — engineered to survive long term in the high-pH environment of a cement matrix.
- Controls plastic shrinkage cracking at the point of initiation, while the mix is still green.
- Reinforces the full depth of the section rather than at a single plane as a mesh sheet does.
- Non-corrosive — no staining, no spalling risk, usable at shallow cover and in permanently wet screeds.
- The fibre component of the FORSPEC enhanced screed mix enabling reduced screed thicknesses.
- Improves screed and mortar toughness, impact resistance and flexural performance.
- Improves cohesion of cementitious mixes and reduces micro-cracking and water penetration.
- Disperses easily during mixing — no special equipment and no change of plant.
- Compatible with all cement-based screeds, mortars and renders, internal and external.

Uses and Approved Basis

- FORSPEC SCREEDX rapid structural screed — the specified reinforcement fibre.
- FORCEM SCREED BINDER screed systems — the specified reinforcement fibre.
- Bonded screeds over prepared concrete.
- Unbonded screeds over slip membranes.
- Floating screeds over insulation and acoustic layers.
- Sand and cement screeds and concrete toppings.
- Screeds over underfloor heating.
- Pre-waterproofing screeds and screeds placed over FORSPEC membrane systems.
- Roofing screeds and falls screeds.
- Screed repair mortars and screed patching mixes.
- Reduced-thickness screed systems, as part of the FORSPEC enhanced mix with ACTFLEX 300, under written FORSPEC approval.

Approved basis: FORSPEC FIBRE X is a reinforcement additive and is not a structural reinforcement product. It carries no classification in its own right and no Australian Standard governs a fibre additive of this type. It is suitable for shrinkage crack control in non-structural applications and is NOT intended to replace structural steel reinforcement where specified by an engineer. Compliance of the finished screed is established by the host system installed in accordance with its own TDS and the relevant Australian Standards.

Compatible Systems

FORSPEC FIBRE X is a component of a host cementitious mix and is never used alone. Approved system components:

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Compatible Systems (continued)

- FORSPEC SCREEDX — rapid structural screed; FIBRE X added per bag at the dosage below.
- FORCEM SCREED BINDER — hydraulic screed binder; FIBRE X added at batching with the sand and binder.
- ACTFLEX 300 — polymer bonding primer and additive; the polymer component of the FORSPEC enhanced screed mix alongside FIBRE X, and the gauging additive where increased cohesion, water resistance and adhesion are required.
- General sand and cement screeds, repair mortars, renders and concrete toppings.
- Membranes beneath — the FORSPEC liquid membrane range or the FORSPEC sheet membrane range, where the screed is placed over waterproofing. Screed placement, slip sheets and minimum thicknesses are governed by the membrane TDS and the screed TDS.

Drying, curing, foot traffic and covering times are governed entirely by the host mix and are stated in the FORSPEC SCREEDX or FORCEM SCREED BINDER TDS. FIBRE X does not alter them. Use only the components above, applied per their current TDS, to maintain system compliance and warranty eligibility.

Standards Compliance

No accredited certificate is currently held for FORSPEC FIBRE X. As a reinforcement additive it is not a screed, mortar or membrane, and no Australian Standard governs its performance in isolation. All values published in this document are typical R&D characteristic values.

STANDARD / REQUIREMENT	POSITION	EVIDENCE
Structural reinforcement	NOT APPLICABLE. FORSPEC FIBRE X does not replace structural steel reinforcement where specified by an engineer.	—
AS 3958:2023 — installation of ceramic and stone tiles	Satisfied at system level by the host screed installed in accordance with this standard.	Refer to the host screed TDS
EN 13813 — screed material performance	Compliance is established by the host screed system, not by the fibre.	Refer to FORSPEC SCREEDX and FORCEM SCREED BINDER TDS
Alkali resistance in a cement matrix	High — alkali-resistant glass chemistry.	Forspec R&D *
VOC content	Not applicable — dry inorganic fibre containing no volatile organic compounds.	—

* Typical characteristic values determined by Forspec R&D on standard production material at 25°C and 50% relative humidity — not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Technical Data

PROPERTY	VALUE	BASIS
Product type	Alkali-resistant fibreglass reinforcement fibre	—
Fibre type	Alkali-resistant fibreglass	—
Colour	White	—
Density	Approx. 2.6 g/cm³	*
Alkali resistance	High	*
Chemical resistance	Excellent	*
Corrosion resistance	Non-corrosive	—

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Technical Data (continued)

PROPERTY	VALUE	BASIS
Water absorption	Negligible	*
Standard dosage	1 kg per tonne of dry mix	—
Enhanced dosage	1.5–2.0 kg per tonne of dry mix	—
Packaging	1 kg	—
Application temperature	5°C to 35°C	—
Shelf life	36 months in dry, sealed packaging	—
Storage conditions	Dry, sealed packaging	—
Effect on host mix timing	None — drying, curing and traffic times are governed by the host mix	—
SDS	Refer to the current FORSPEC FIBRE X Safety Data Sheet at www.forspec.com.au	—

* Typical characteristic values determined by Forspec R&D on standard production material at 25°C and 50% relative humidity — not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Limitations

- NOT a structural reinforcement. FORSPEC FIBRE X does not replace structural steel reinforcement where specified by an engineer, and must never be substituted for engineered reinforcement.
- Does not replace movement joints. All movement, control and expansion joints designed for the structure must be provided in full.
- Existing control joints in the substrate must be carried through the screed system — a fibre-reinforced screed does not permit a joint to be bridged.
- Excessive water addition reduces performance. Fibre reinforcement does not compensate for an over-watered mix.
- Correct screed design, substrate preparation, compaction and curing practice must be maintained in full — the fibre supplements good practice, it does not substitute for it.
- Reduced-thickness screeds are permitted only with the complete FORSPEC enhanced mix and written FORSPEC approval. FIBRE X alone does not permit a reduction in screed thickness.
- Dry blend before adding water. Adding fibre to an already-wet mix produces balling and uneven dispersion.
- Do not exceed the enhanced dosage rate. Over-dosing impairs workability, compaction and finish without further benefit.
- Surface fibres may be visible on a steel-trowelled finish. Where a fine finish is critical, complete a trial panel first.
- Trial applications are recommended before general use on any new mix design.
- Keep dry in storage — the packaging must remain sealed until the point of use.

Dosage

Dosage is by weight of the total dry mix — binder plus sand plus aggregate, excluding water. Two rates apply.

Standard crack control — 1 kg per tonne of dry mix

DRY MIX QUANTITY	FIBRE X REQUIRED	WORKING
20 kg mix	20 g	1 kg/t ≡ 1 g/kg
40 kg mix	40 g	40 × 1 g
100 kg mix	100 g	100 × 1 g
1 tonne dry mix	1 kg	Base rate
1 m³ screed mix	Approx. 2 kg	At a compacted density of approx. 2 tonne/m³

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Dosage (continued)

Enhanced crack control — 1.5 to 2.0 kg per tonne of dry mix

For improved crack resistance, toughness and impact performance, and mandatory in reduced-thickness screed systems.

DRY MIX QUANTITY	FIBRE X REQUIRED	WORKING
20 kg mix	30–40 g	1.5–2.0 g/kg
40 kg mix	60–80 g	40 × 1.5–2.0 g
100 kg mix	150–200 g	100 × 1.5–2.0 g
1 tonne dry mix	1.5–2.0 kg	Base rate
1 m³ screed mix	Approx. 3–4 kg	At a compacted density of approx. 2 tonne/m³

FORSPEC SCREEDX — per bag

APPLICATION	FIBRE X PER 20 KG SCREEDX BAG
Standard crack control	20 g
Enhanced crack control	30–40 g
Reduced-thickness screed systems	30–40 g, with ACTFLEX 300 and written FORSPEC approval

Measure the dosage by weight, not by volume or by eye. A calibrated scale or a pre-weighed sachet is required — fibre dosage is small enough that visual estimation produces significant error across a pour.

Mixing

FORSPEC FIBRE X is always dry blended into the mix before water is added. Adding fibre to a wet mix produces balling, uneven dispersion and visible clumps in the finished surface.

General concrete and mortar mixes

- Add sand, cement and aggregates into the mixer.
- Add the required quantity of FORSPEC FIBRE X.
- Dry blend for approximately 60 seconds to ensure even fibre distribution.
- Add water and any approved additives.
- Continue mixing until a uniform consistency is achieved.
- Extend normal mixing time by an additional 30–60 seconds to allow complete fibre dispersion.
- Place and compact the material as normal.

FORCEM SCREED BINDER mixes

- Add FORCEM SCREED BINDER and clean sand into the mixer.
- Add the required quantity of FORSPEC FIBRE X.
- Dry blend for 60 seconds.
- Add water gradually.
- Mix for 2–3 minutes until a uniform moist-earth consistency is achieved.
- Extend mixing time by 30–60 seconds compared to standard mixes.
- Where additional cohesion, water resistance and adhesion are required, the mix may be enhanced with ACTFLEX 300 per its TDS.

FORSPEC SCREEDX mixes

- Add the required quantity of FORSPEC FIBRE X to the dry SCREEDX powder.
- Dry blend to distribute the fibre before water is added.
- Mix as per the FORSPEC SCREEDX TDS.
- Continue mixing for an additional 30–60 seconds to ensure complete fibre dispersion.

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Mixing (continued)

Check dispersion before placing: take a sample of the wet mix and confirm the fibres are evenly distributed throughout with no visible clumps or balls. Where clumping is present, extend the mixing time and review the batching sequence — fibre added after water is the usual cause.

Reduced-Thickness Screed Systems

FORSPEC FIBRE X is the fibre component of the FORSPEC enhanced screed mix, which permits screed thicknesses below the standard minimums. The reduction is a property of the complete enhanced system, not of the fibre alone.

SCREED TYPE	STANDARD MINIMUM	REDUCED MINIMUM WITH THE ENHANCED MIX
Bonded screed over prepared concrete	10 mm	5 mm — ACTFLEX 300 + FORSPEC FIBRE X, written FORSPEC approval required
Unbonded screed over a FORSPEC membrane	40 mm per AS 3958:2023	35 mm — FORSPEC SCREEDX engineered screed, mesh reinforced, over a 200-micron slip sheet
Below 35 mm unbonded	Not permitted	Written FORSPEC approval, the ACTFLEX 300 + FORSPEC FIBRE X enhanced mix, and project-specific assessment
Bonded screed over ACTFLEX 906 WPU	10 mm direct to the cured membrane	5 mm — ACTFLEX 300 + FORSPEC FIBRE X enhanced mix, written FORSPEC approval required

Conditions applying to every reduced-thickness screed:

- Written approval from an authorised FORSPEC representative must be obtained before placement. Verbal approval is not sufficient.
- FORSPEC FIBRE X must be dosed at the enhanced rate — 1.5 to 2.0 kg per tonne of dry mix, or 30–40 g per 20 kg SCREEDX bag.
- ACTFLEX 300 must be included in the mix per its TDS. The fibre alone does not permit a reduction.
- Unbonded reduced-thickness screeds must be mesh reinforced with the mesh positioned centrally within the screed section, over a continuous 200-micron polyethylene slip sheet with 200 mm laps.
- Bonded reduced-thickness screeds require the substrate prepared and the slurry bond coat applied per the host screed TDS.
- All movement and control joints must be carried through the screed at full depth.
- The approval, mix design, dosage and placed thickness must be recorded on the project quality records.

FIBRE X reduces cracking risk in a thin section — it does not increase the load capacity of the screed. Where the screed carries load, the thickness and design remain the responsibility of the project engineer.

Clean Up

FORSPEC FIBRE X is a dry inorganic fibre and requires no solvent. Collect spilled fibre by vacuum or by sweeping with a dust-suppressing compound — do not dry sweep, which raises airborne fibre. Clean mixing plant, paddles and drums of the host cementitious mix while it is still wet, in accordance with the host product TDS. Once the host mix has hardened, fibre is bound within it and can only be removed mechanically.

Wash water from cleaning cementitious plant is alkaline and contains fibre. It must not be discharged to sewers, stormwater systems or waterways. Manage and dispose of all washings in accordance with the relevant State or Territory environment protection legislation and local council requirements.

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Container and Waste Disposal

Unused fibre in sealed packaging within its shelf life may be retained for future use. Fibre that has been exposed to moisture, contaminated or held beyond its shelf life must be discarded.

Dispose of surplus fibre, contaminated fibre and empty packaging in accordance with the WHS Regulations, the relevant State or Territory EPA requirements and local council regulations. Fibre bound within hardened cementitious material is disposed of as inert construction waste. Do not dispose of loose fibre to stormwater, soil or waterways. Do not reuse packaging for other products. Refer to Section 13 of the SDS for detailed disposal requirements.

Quality Records

Record and retain the following as part of the project quality assurance records and as a condition of warranty eligibility:

- Batch numbers of FORSPEC FIBRE X and of the host screed binder or powder used. Batch numbers are printed on the packaging and provide full manufacturing traceability.
- The mix design placed — binder, sand or aggregate proportions, water content and any ACTFLEX 300 dosage.
- The FIBRE X dosage rate used, stated in grams or kilograms per batch, and the method by which it was weighed.
- Confirmation that the fibre was dry blended before water addition, and the total mixing time achieved.
- Dispersion check result on the first batch of each pour.
- Placed screed thickness at the thinnest point, and the design minimum it was assessed against.
- Where a reduced-thickness screed has been placed, the written FORSPEC approval reference and the date it was issued.
- Ambient and substrate temperature at the time of placement.
- Name and licence details of the applicator, and sign-off of the mix design before placement commenced.

Storage

Store in the original sealed packaging in a cool, dry, well-ventilated area, clear of the ground and protected from moisture, rain and direct sunlight. The packaging must remain sealed until the point of use — fibre that has absorbed moisture will clump and will not disperse evenly through the mix.

Shelf life is 36 months from the date of manufacture in dry, sealed packaging stored as specified. Store away from food, drink and animal feedstuffs, and stock rotate on a first-in, first-out basis. Do not use product beyond its shelf life.

Safety Precautions and First Aid

ACTFLEX FIBRE X — FORSPEC is classified per its current Safety Data Sheet. Read the Safety Data Sheet in full before use — it is available at www.forspec.com.au and governs in the event of any inconsistency with this document. The product is a dry inorganic fibreglass fibre. Handling generates airborne fibre and dust which may cause mechanical irritation of the eyes, skin and upper respiratory tract.

Handling

Wear safety glasses or goggles, gloves and long-sleeved clothing when handling and decanting. Wear a P2 respirator where fibre or dust may become airborne, particularly when charging a mixer. Handle in a well-ventilated area and avoid raising dust. Do not dry sweep spilled fibre. Fibre irritation is mechanical rather than chemical — do not rub eyes or skin, as rubbing drives filaments further in. Wash exposed skin with cool water before washing with soap, and launder work clothing separately. Note that the host cementitious mix is alkaline and caustic when wet; observe the safety requirements of the host product SDS in addition to this document.

First aid

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Safety Precautions and First Aid (continued)

- Eyes — do not rub. Rinse cautiously with plenty of water for several minutes, holding the eyelids apart, to flush filaments clear. Seek medical attention if irritation persists or if a foreign-body sensation remains.
- Skin — do not rub. Rinse with cool running water to flush filaments from the surface before washing gently with soap and water. Seek medical attention if irritation persists.
- Inhaled — move the affected person to fresh air and keep at rest. Seek medical attention if coughing or throat irritation persists.
- Swallowed — rinse the mouth with water and drink a glass of water. Seek medical attention if discomfort occurs.

POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours)

Keep Out of Reach of Children

In an emergency call 000.

Warranty

Standard Product and Performance Warranty: Forspec Protective Coatings Pty Ltd as Trustee for Forspec Protective Coatings (ABN 11 204 033 631) warrants that ACTFLEX FIBRE X — FORSPEC will be free from manufacturing defects and will not fail under normal usage for a period of ten (10) years from the date of purchase, when installed and used strictly in accordance with this Technical Data Sheet and Forspec's written instructions. This warranty covers the supply of the product only; it does not cover installation, application or workmanship. Remedies are limited, at Forspec's discretion, to replacement of the defective product (or defective portion) or a refund of the purchase price. The full terms, conditions and exclusions are set out in the Forspec Standard Product and Performance Warranty, available at www.forspec.com.au — key conditions include application by a suitably qualified and, where required by law, licensed applicator; use within shelf life; and installation as part of a Forspec approved system without non-approved third-party products.

Project and system warranties: extended project-specific warranties are available at the request of the applicator and must be applied for using the Forspec Warranty Request Form prior to commencement of works. Issue is subject to Forspec approval and is conditional on the use of the complete specified FORSPEC system, application in strict accordance with the current TDS by suitably qualified applicators, and completion of the project quality records described above. The warranty period and terms are as stated in the issued warranty certificate.

Claims: notify Forspec in writing within thirty (30) days of discovery of the alleged defect and within the warranty period, by post to 22/872 Canterbury Road, Roselands NSW 2196 or by email to info@forspec.com.au, including proof of purchase, installation details (date, location, installer), a description of the defect with supporting evidence, and your contact details. Forspec may inspect the site, perform testing and collect samples before determining a claim.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Data Sheet Currency

This Technical Data Sheet is valid for three (3) years from the issue date shown above, unless superseded earlier. It supersedes all previous versions. It is the responsibility of the customer and the applicator to confirm that this document and the corresponding Safety Data Sheet are the current versions, available at www.forspec.com.au.

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