



FIRETEX® CONCRETE WB

WATER-BASED INTUMESCENT FOR CONCRETE STRUCTURES

Revised 07/2023 Issue 1

PRODUCT DESCRIPTION

A water-based fire protection coating system for concrete located in interior situations, e.g. not exposed to weathering. It forms an insulating carbon char foam under the effect of heat or fire and protects the concrete substrate against heat and fire.

- Free of halogens and aromatic solvents
- Meets CO₂ SD (Class C1) > 50m without any additional coating
- Direct application on concrete. No need of primer or scrim
- Third party approved repair mortars

RECOMMENDED USE

FIRETEX® Concrete WB is designed for refurbishing / change of use of building structures like concrete. It prohibits the spalling of concrete structures and significantly delays the heat input to steel reinforcements.

Note: In case of semi-exposed or exposed areas (Type Y) please contact the technical department for further consultation.

PRODUCT TECHNICAL DATA

Volume Solids:	76 ± 2% (according to BCF Guidance Method)
VOC:	0 g/l determined practically in accordance with Protective Coatings Directive of German Paint Industry Association (VdL-RL 04). 0 g/l calculated from formulation to satisfy EC Solvent Emissions Directive. 0 g/kg calculated from formulation to satisfy EC Solvent Emissions Directive (UK).
Colours:	White
Flash Point:	Not applicable
Cleaner/Thinner:	Water (for cleaning) Thoroughly clean tools and equipment immediately after use. Do not thin FIRETEX® Concrete WB.
Pack Size:	Single component material: 25 kg (17.8 litre). Volume will vary with density.
Density:	1.4 kg/l
Shelf Life:	18 months from date of manufacture, stored in originally sealed containers in a cool and dry environment - Protect from frost.

Recommended Application Methods:

Airless Spray, Brush and Roller

Typical Thickness:

Recommended Spreading Rate Per Coat

	Typical
Dry	500 µm
Wet	658 µm
Theoretical Consumption*	0.921 kg/m ² 0.658 l/m ²
Theoretical Coverage*	1.09 m ² /kg 1.52 m ² /l

The following table indicates the equivalent concrete** thickness to be substituted by FIRETEX® Concrete WB based on different fire resistance periods.

Concrete structure/ concrete type1	DFT FIRETEX® Concrete WB
Coverage range for slabs and walls, one dimensional	0.395 – 0.918 mm
Coverage range for columns and beams, horizontal and vertical orientation	0.395 – 0,988 mm

* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment.

** C30/ 37 concrete type, other concrete types (up to C90/ 105) are available upon request.

Fire rate of FIRETEX® Concrete WB depends on national standard. See corresponding separate consumption table / diagram..

Exposure period:	60 min	90 min	120 min
Equivalent concrete thickness for slabs and walls	20 mm	13 mm	17 mm
Equivalent concrete thickness for columns and beams	25 mm	16 mm	12 mm

The test results are based on EN 13381-3:2015 and the requirements set in EN 1992-1-2 and DIN 4102-4.



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AVERAGE DRYING TIMES

For 500 µm Dry Film Thickness:

	+ 20°C and 60% RH
Dry to touch	10 min
Dry to handle	20 min

Minimum and maximum recoat intervals (at + 20°C)

FIRETEX® Concrete WB requires a minimum of 12 hours drying prior to application with itself.

It requires a minimum of 24 hours drying prior to application of topcoats FIRETEX® Top WB and FIRETEX® Top SB / FIRETEX® Top SB EG.

A complete drying of the fire protection coating prior topcoat application is mandatory.

Through-drying of FIRETEX® Concrete WB can be checked by 'fingernail-test'.

Final cure: Approx. 24 hours after application of last coat at + 20°C object temperature and 60% relative humidity.

These figures are given as a guide only. Factors such as air movement, film thickness and humidity must also be considered.

APPROVALS & ENDORSEMENTS

Independently fire tested and approved to major European and national standards including:

- ETA-18/1152
- EN 13381-3:2015 including Annex A, smouldering fire
- EN 1062-1, table 7

Sustainability:

- VOC compliant according to German AgBB and to French Decree No. 2011-321 (A+)

SURFACE PREPARATION

Surfaces to be coated must be brushed off and vacuum cleaned afterwards. They have to be solid to support any loads, free of sludge, dirt, oil, grease, wax, water-repellent agents and other contamination. Residual humidity in the concrete must be below 4% according to CM-humidity measuring instrument.

In case of existing coatings, a compatibility test with the fire protection system is mandatory.

Any damage or imperfection (impact, corrosion, etc.) should be repaired prior the coating with the adequate repair mortar.

MIXING

The material is supplied ready for use; stir thoroughly with a mechanical paint mixer prior to application.

During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothings.

APPLICATION CONDITIONS

Substrate temperature shall be between + 5°C and + 40°C* and at least 3°C above the dew point.

Material temperature shall be above + 15°C

Relative air humidity shall be below 80%.

During application and drying of total FIRETEX® Concrete coating system including FIRETEX® topcoats as well as transportation special protection measures must be taken against weathering.

* If higher temperatures occur, please consult Sherwin-Williams for further assistance.



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APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for satisfactory application characteristics. Always purge spray equipment before use with listed cleaner (water).

Airless Spray

Unit: Efficient airless equipment (pressure ratio > 45: 1)

Tip Size: 0.48 – 0.61 mm (0.019 – 0.024 inch)

Fan Angle: 40° - 80°

Operating Pressure: min. 200 bar (2900 psi)

Spray hoses: Ø ¾ inch (10 mm), max. 20 m
+ 2 m with reduced Ø of ¼ inch (6 mm)

Note: Hoses must be used for water-based products only.

Temperature of material and equipment at least + 20°C. Remove sieves. Pump directly (without connected suction hose). Material shall be applied undiluted.

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent satisfactory atomisation.

As conditions will vary from job to job, it is the applicators responsibility to ensure that the equipment in use has been set up to give the best results.

If in doubt consult Sherwin-Williams customer service.

Brush and Roller

- Material shall be applied undiluted
- Load natural fine bristle brushes or short pile lambswool rollers are recommended

RECOMMENDED SYSTEMS

Damaged concrete surfaces:

Suitable repair mortar

Primer:

Not needed

Fire protection coating for concrete:

FIRETEX® Concrete WB

Topcoat (optional):

- FIRETEX® Top WB, available in all RAL colour shades
- FIRETEX® Top SB / FIRETEX® Top SB EG available in RAL colour shades or on request for other colour shades

For decorative reasons or in case of higher relative humidity we recommend the use of one of the above-mentioned topcoats (see separate product data sheets of the topcoats).

The use for semi-exposed and exposed areas (Type Y) is possible.

Please contact the technical department for further consultation.

HEALTH & SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

Whilst all statements made about our products (whether in this data sheet or otherwise) are correct and accurate to the best of our knowledge, we have no control over the quality or the condition of the substrate, the application conditions or the many other factors affecting your use and application of our product.

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