



X-Tech EpoxySeal FLR100

Chemical resistant high build epoxy floor coating

Product Description

X-Tech EpoxySeal FLR100 is a high performance, high build, solvent free epoxy floor coating that is also decorative and suitable for use in a wide range of applications. It can also be used as a wall coating. A solvent free, lower viscosity version (FLR100LV) is available for application at 100 microns per coat. A high build version (FLR100HB) is available for application at 250 to 300 micron per coat.

Advantages

- Meets SCAQMD Rule 1113 & LEED VOC Limits
- High abrasion resistance
- Resistant to wide range of chemicals
- Smooth and anti-slip finish available
- Easy to clean and maintain

Uses

- Car park decks
- Process areas
- Pharmaceutical, food and beverage plants
- Storage areas
- Stairwells

Specification Compliance

SCAQMD Rule 1113 LEED NC2009 IEQ 4.2
 FDA CFR 21 Section 175.300 EFNARC Type 3A
 FeFRA Type 3 MD

Laboratory Test Data

Property	Typical Results
Compressive strength (ASTM D695)	>80MPa
Compressive modulus (ASTM D695)	>5000MPa
Flexural strength (BS EN196)	>50MPa
Tensile strength (ASTM D638)	>15MPa
Abrasion resistance (ASTM 4060, CS17 wheel)	41.3mg loss/1000 cycles
Impact resistance (ASTM D2794)	No cracking
Bond to concrete (BS 1881)	>2MPa
Coefficient of static friction (ASTM F609)	>0.6 dry >0.6 wet (smooth) >0.9 dry >1.2 wet (antislip)

Fire Performance

UK Building Regulations (Document B): Class O
 BS 476 Part 7: Class 1 Surface Spread of Flame

Service Temperature

5 to 60C

Volatile Organic Content

X-Prime SF = <50g/L
 X-Prime MT100 = <50g/L
 X-Tech EpoxySeal FLR100 = <50g/L

Application Properties

Application thickness	300 to 400 microns		
Application temperature range	10 to 35C (50 to 95F)		
	10C	20C	30C
Pot life			
X-Prime SF	120 mins	60 mins	30 mins
X-Prime MT100	360 mins	180 mins	90 mins
X-Tech EpoxySeal FLR100*	180 mins	90 mins	45 mins
Recoat time	24 to 48 hours	16 to 32 hours	8 to 24 hours
Full cure	14 days	7 days	5 days

* A fast cure version is available.

Chemical Resistance

X-Tech EpoxySeal FLR100 has excellent resistance to the following chemicals:

10% Lactic acid	White spirit
50% Sulphuric acid	Oils
Concentrated bleach	Petrol
Saturated sugar solution	Xylene
Saturated urea solution	10% Ammonia

Colors

RAL 7001 Silver Grey RAL 5017 Traffic Blue
 RAL 6029 Mint Green RAL 1001 Beige
 RAL 7035 Light Grey RAL 3002 Carmine Red
 Others colours available on request.

Theoretical Coverage

X-Prime SF: 10m²/L
 X-Prime MT100: 5 to 6m²/L
 X-Tech EpoxySeal FLR100: 5 to 6.6m²/L
 Actual coverage will depend on wastage and surface profile and can be up to 20% or more higher than theoretical coverage.

Packaging

X-Prime SF & X-Prime MT100: 1, 5 and 15L packs
 X-Tech EpoxySeal FLR100: 15L pack.

Shelf Life

18 months when stored below 30C (86F) under shade in a dry environment.

Installation Guidelines

X-Tech EpoxySeal FLR100 should be applied by experienced coating crews. X-Calibur provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

Surface Preparation

The substrate must be structurally sound. Loose or unsound concrete should be removed and made good. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. The surface should be prepared by captive blasting to produce a lightly exposed aggregate surface i.e. a ICRI CSP 4 or 5 surface profile. Any bug holes (blow holes) should be filled with X-Shield BugFill or X-Tech Primer Filler (when using X-Prime MT100 apply BugFill or Primer Filler after priming). If substrate is not level or is uneven, level using X-Tech LevelCem HD.

Moisture Testing

The concrete slab should be tested for moisture with the Rapid RH system following the procedure in ASTM F2170. If the humidity reading is greater than 80% then conduct moisture vapor emission rate (MVER) testing using the procedure in ASTM F1869. (Both test kits are available for purchase from X-Calibur). If the MVER is 3 to 5 lbs/1000ft²/24h use a single coat X-Prime MT100 at 165 microns wft. If the MVER is 5 to 12 lbs/1000ft²/24h use two coats of X-Prime MT100 at 200 microns wft per coat.

Priming

Prime with X-Prime SF or X-Prime MT100 and allow to dry before applying X-Tech EpoxySeal FLR100. The base and hardener have to mixed using a slow speed drill and approved mixing paddle until homogenous. The mixed primer should then be applied to the prepared substrate with a polyurethane squeegee and back rolled with a short hair roller (X-Calibur velvet roller or similar). Do not over apply or allow puddles of primer to form. If the primer is absorbed into the surface easily, it will be necessary to apply a second coat once the initial coat is tack-free. Allow the primer to become tack-free before application of X-Tech EpoxySeal FLR100. Apply X-Tech EpoxySeal FLR100 within the recoat window.

Mixing

Add the hardener to the base and mix using a slow speed drill with an X-Shield Coating Mixer. Paddle for 3 minutes until both components have fully dispersed and are uniform in color. Be sure to rotate the mixer throughout the drum. Mix only full packs.

Application

Apply in two coats of 150 to 200 microns per coat (6 to 8mils) wet film thickness using short hair roller (X-Calibur velvet roller or similar) or airless spray. Recoat

after 6 to 24 hours at 25C. Clean equipment using X-Shield Solvent S.

Slip Resistant Finish

A slip resistant finish can be achieved by broadcasting X-Tech Anti Skid Grains onto the surface of the first coat while still wet. The grain size (Fine, Medium or Coarse) and broadcast rate will depend on the surface texture required but will generally be in the range of 0.5 to 1kg/m².

Limitations

May change color when exposed to direct sunlight. Do not be apply within 3C of the dewpoint or if it is within 5C of the dewpoint and dropping. Avoid excessive application. Avoid skin contact. Do not apply below 10C. Do not discard into the water system. Protect from chemical and water spillage until fully cured.

Health and Safety

This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website www.x-calibur.us

Authorized Technical Specialist

Please note that only X-Calibur Authorized Technical Specialists ('ATs') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit www.x-calibur.us for a full list of X-Calibur ATs.

Datasheet Validity

X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.x-calibur.us to ensure you have the latest version.

Warranties

X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. X-Calibur does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to X-Calibur in writing within five working days of being detected. X-Calibur Construction Systems Inc. **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** X-Calibur Construction Systems Inc. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.