X-CALIBUR CONSTRUCTION CHEMISTRY

Technical Data Sheet

X-Tech EpoxyFloor SL

Abrasion and chemical resistant self-leveling epoxy floor

30191622

Product Description

X-Tech EpoxyFloor SL is a three component, self smoothing epoxy floor topping that produces an extremely dense, durable, abrasion and chemically resistant floor. It can be supplied either with a pigmented base or with a neutral color base with separate color pack.

It is available in four grades:
X-Tech EpoxyFloor SL1, thickness: 1 to 1.5mm
X-Tech EpoxyFloor SL2, thickness: 2 to 3mm
X-Tech EpoxyFloor SL3, thickness: 3 to 4mm
X-Tech EpoxyFloor SL4, thickness: 4 to 6mm.

Advantages

- Meets SCAQMD Rule 1113 & LEED VOC Limits
- Formaldehyde free
- High impact and abrasion resistance
- Fast application
- Easy to clean finish
- Resistant to wide range of chemicals
- Does not support growth of bacteria, fungi or micro-organisms

Uses

X-Tech EpoxyFloor SL is used in industrial and commercial situations to provide an easy-to-clean floor finish able to withstand mechanical abrasion and the spillage of aggressive chemicals in locations such as:

- Food and beverage plants
- Pharmaceutical facilities
- Kitchens and laundries
- Hospitals
- Laboratories and clean rooms
- Chemical handling and processing areas

Specification Compliance

SCAQMD Rule 1113
FDA CFR 21 Section 175.300
EFNARC Type 5A (SL2 & SL3)
FeFRA Type 5 MD/HD (SL2 & SL3)
LEED NC2009 IEQ 4.2
EFNARC Type 7A (SL4)
FeFRA Type 7 HD/VHD (SL4)
DCL Green Building Regulations

Fire Performance

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

Service Temperature

0 to 60C

Volatile Organic Content

VOC = <10g/L

Colors

RAL 7035 Light grey
RAL 7043 Traffic grey B
RAL 1017 Saffron yellow
RAL 3002 Carmine red
RAL 9001 Cream
RAL 7042 Traffic grey A
RAL 7001 Silver grey
RAL 6017 May green
RAL 5017 Traffic blue
RAL 1002 Sand yellow

Laboratory Test Data

Property	Typical Results SL1	SL2/SL3	SL4
Compressive strength (ASTM D695)	>70MPa		
Compressive modulus (ASTM D695)	>5000MPa		
Flexural strength (ASTM EN196)	>35MPa	>35MPa	>40MPa
Tensile strength (ASTM D638)	>15MPa	>15MPa	>20MPa
Impact resistance (ASTM D2794)	>5 Joules		
Abrasion resistance (ASTM D4060)	<50 mg		
Coefficient of static friction (ASTM F609)	>0.9 dry >0.6 wet		

Above results were obtained after 7 days cure at 25C.

Application Properties

Application temperature range	5 to 35C
Pot life at 25C	75 minutes

Chemical Resistance

X-Tech EpoxyFloor SL has good resistance to the following:

10% Lactic acid
Concentrated bleach
Saturated sugar solution
Saturated urea solution
Oils
Petrol
Greases
10% Ammonia

Theoretical Coverage

X-Prime SF: 10m^2 per liter at 100 microns wft.
X-Prime MT100: 5m^2 per liter at 200 microns wft.
X-Tech EpoxyFloor SL1: 17m^2 per 17L pack at 1mm
X-Tech EpoxyFloor SL2: 8.5m^2 per 17L pack at 2mm
X-Tech EpoxyFloor SL3: 5.7m^2 per 17L pack at 3mm
X-Tech EpoxyFloor SL4: 4.25m^2 per 17L pack at 4mm

Packaging

X-Tech EpoxyFloor SL: 17 liter packs
X-Prime SF & X-Prime MT100: 5 and 15 liter packs.

Shelf Life
12 months when stored between 10 to 35C under shade in dry conditions.

Installation Guidelines
Epoxy flooring should only be carried out by experienced contractors. 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. 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 under 3lbs/1000ft^2/24h use X-Prime SF. If the MVER is 3 to 5 lbs/1000ft^2/24h use a single coat X-Prime MT100 at 165 microns wft. If the MVER is 5 to 12 lbs/1000ft^2/24h use two coats of X-Prime MT100 at 200 microns wft per coat.

Priming
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 stiff brush or roller. 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 the layer. Apply next layer within 24 hours of priming.

Mixing and Application of X-Tech EpoxyFloor SL
The base component should be briefly stirred to ensure that any settlement products are fully suspended. Mixing should be carried out using a forced action mixer such as a Mixit 25 (mixers are available to purchase or rent from X-Calibur). Mix the components until homogenous. Spread the mixed product onto the tack-free primer using a notched vee rake followed by a pin leveller set to achieve the required thickness. Immediately after spreading, roll using a spiked roller to release trapped air and remove trowel marks. Rolling should be completed within 20 minutes.

Cleaning
Tools should be cleaned immediately after use and before the resin sets, using a X-Shield Solvent S. Once the resin has set, it can only be removed by mechanical means.

Limitations
Will change color when exposed to direct sunlight.
If any dust is present during application "fish eyes" may occur.
Do not use solvent to finish the surface.
Do not be apply within 3C of the dewpoint or if it is within 5C of the dewpoint and dropping.
Do not apply below 5C or above 35C.
Avoid skin contact.
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 ('ATSs') 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 ATSs.

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