Talrakflorkote SF

Solvent free epoxy based floor coating

The Construction Alchemists

Description

Talrakflorkote SF is epoxy resin and curing agent based floor coating system which is solvent free and specially characterized for resisting chemical attacks. It is a 3 component system with base, hardener and Talrakflor colour pack which are reactive to each other providing essential properties for an effective floor coating system. An optional slip resistant texture can be provided by the use of one of a range of antislip grains which have been carefully graded to ensure an even texture.

Features & Benefits

- Available in a wide range of colours to improve the working environment and identify slip hazard areas.
- Liquid applied providing complete protection.
- Customized textures available to ensure slip resistance.
- Hard wearing floor coat with minimum maintenance costs.
- Odorless Solvent free application.
- Provides fully sealed surface with very good chemical resistance.

Primary Application

Talrakflorkote SF provides a chemical and abrasion resistant floor finish. It is ideally suited for areas where a high degree of chemical resistance is required and floors which are subject to spillage of oils and grease on the floor. It can be used for kitchens, Breweries, chemical plants, dairies etc.,.

Technical properties

The following values were obtained when tested at 20°C and 30°C.

Properties	@ 20°C	@30°C
Pot Life	40mins	20mins
Cure Time	24hrs	18hrs
Max. Time b/w Coats	36hrs	15hrs
Light Traffic use after	24hrs	18hrs
Full Traffic use after	48hrs	24hrs
Resistance to chemical spillage	7days	5days

Compressive strength	70MPa
Flexural strength	40MPa
Tensile strength	20MPa
Water Absorption (ASTM C 413:1996)	0.06%
Shore D Hardness (ASTM D 2240:1996)	85

Chemical resistance

Talrakflorkote SF samples, fully cured were subjected to immersion, dimensional stability and loss of mass test in commonly used aggressive chemicals in the industries. Tests were performed in accordance to ASTM D 543 standards over 168 hours (7 days) at 23 ±2°C)

Acids

Lactic acid 10%	Resistant
Citric acid 10%	Resistant
Acetic acid 10%	Resistant
Hydrochloric acid 50%	Resistant
Sulphuric acid 50%	Resistant
Nitric acid 25%	Resistant

Alkalis

Sodium hydroxide 50%	Resistant
Ammonia (0.880) 10%	Resistant

Solvents

Petrol	Resistant
Oil	Resistant
Kerosene	Resistant
Butanol	Resistant
Skydrol	Resistant
Industrial Methylated spirits	Resistant

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Others

Saturated sugar solution	Resistant
Urea (saturated)	Resistant
Bleach 5%	Resistant

All the above properties have been determined by laboratory controlled tests and are in excess of those expected in practice.
Nevertheless, success in use will be determined by the implementation of good housekeeping practices.

Design Criteria

Talrakflorkote SF is applied as a floor coating system comprising of two top coats (depending on the substrate conditions a primer might be required), each top coat to be a minimum of 200 microns thick. To provide a slip resistant texture, the first top coat can be dressed with Anti-slip grains.

Specification Clause

The epoxy resin floor coating shall be a three part system Talrakflorkote SF from Talrak. The coating shall be capable of providing defined level of chemical resistance. The total dry film thickness of the coating shall be a minimum of 400 microns and shall have a flexural strength of 40MPa and a pull out bond strength of 2.0 MPa when applied in accordance with the manufacturer's current data sheet.

Applications Instructions

Surface preparation

The adhesive bond between the flooring material and the substrate shall determine the durability of a resin floor system. Therefore a thorough surface preparation is very essential.

New concrete floors

The new concrete should at least be 28 days old which will not have a moisture content of more than 5%. The substrate should be free from dust, laitance, oil, grease, curing compound residues and any other type of contamination. Excessive laitance can be removed with the help of a wire brush. Dust and other debris should then be removed by vacuum cleaning.

Old concrete floors

A sound, clean substrate free from laitance, oil and grease is essential to achieve maximum adhesion. Dry removal of laitance by use of wire brush is recommended. Oil and grease penetration should be removed by the use of a proprietary chemical degreaser or by hot compressed air treatment. Any damaged areas or surface irregularities should be repaired using Rendercem® range of repair mortars .

Priming

Priming of the substrate depends upon the porosity of the substrate. If the substrate is porous Talrakepoprime LV should be used as a primer. Contact Talrak for further assistance.
Talrakepoprime LV should be mixed in the proportions supplied. Add the entire contents of the hardener can to the base can. Throughly mix the contents with a slow speed paddle mixer. Apply the primer in a thin continuous film, using rollers or stiff brushes. Avoid ponding or over application of the primer.
The primer should be completely dry before application of the top coat. A second coat of primer may be required if the substrate is excessively porous.

Mixing the coating

The base and hardener components of Talrakflorkote SF should be thoroughly stirred before the two are mixed together with a slow speed paddle mixer (500rpm). The entire contents of the hardener container should be poured into the base container and the two materials should be mixed thoroughly, then add the colour pot and mix for at least 3 minutes. Mix the components in the quantities supplied taking care to ensure all containers are scraped clean. Do not add solvent thinners at any time.

Standard Application

The first coat of Talrakflorkote SF should be applied using a good quality medium haired pile roller, suitable for epoxy application, or squeegee to achieve a continuous coating. Ensure that loose hairs on the roller are removed before use. A minimum film thickness of 200 microns should be applied. This can be increased where specifications demand. When the base coat has reached initial cure (12 hours @ 20°C or 5 hours at 35°C). The top coat can be applied by medium haired roller, at minimum film thickness of 200 microns. Care should be taken to ensure that a continuous film is achieved.

Anti-slip Application

If a slip resistant texture is required, the base coat shall be applied as per the standard application, but at a minimum film thickness of 250 microns. The base coat should then be dressed with the chosen Talrakflorkote SF Antislip Grain. This should be done as soon as possible after laying. The recommended procedure is to completely blind the base coat i.e. apply excess dressing aggregate to completely obliterate
The base coating. Alternatively, the Talrakflorkote SF Antislip Grains can be broadcast in a light random dressing to provide a less dense finish. When the base coat has reached initial cure (12 hours @ 20°C or 5 hours at 35°C), the excess aggregate should be vacuum cleaned from the surface.
The top coat can now be applied by medium haired roller, at a rate of 4.0m^2/litre. Care should be taken to ensure that a continuous film is achieved and the rough surface, caused by the aggregate, is completely sealed. This top coat must be applied within 36 hours @ 20°C (15 hours @ 35°C) of the application of the first coat.

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Expansion joints
Expansion joints in the existing substrate must be retained and continued through the Talrakflorkote SF topping. Talrak have a range of joint sealants specifically designed for flooring, contact Talrak for advice.

Cleaning
Tools and equipment should be cleaned with Talrasol GP Sol* immediately after use. Spillages should be absorbed with sand or sawdust and disposed off in accordance with local regulations.

Limitations
- Talrakflorkote SF should not be applied on to surfaces known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A, or Protimeter thermo hygrometer.
- Talrak does not recommend acid etching as a method of floor preparation. If used, the method should be approved by the project consultant
- In common with all epoxy materials, some slight shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

Estimating
Packaging

Talrakepoprime LV	1 & 4 litre packs
Talrakflorkote SF (Including colour pack)	4.5 litre packs
Antislip Grains	20 kg bags
Talrasol GP	5 & 20 ltr cans

Standard Coverage

Talrakepoprime LV	5.5 - 6.5 m^2/litre
Talrakflorkote SF (base coat)	5.0m^2/litre @ 200 microns wft
Talrakflorkote SF (top coat)	5.0m^2/litre @ 200 microns wft

Coverage - Antislip (approx.)
For medium texture

Talrakepoprime LV	5.5 - 6.5 m^2/litre
Talrakflorkote SF (base coat)	4.0m^2/litre @ 250 microns wft
Antislip Grain No 2	1.25-3m^2/kg
Talrakflorkote SF (top coat)	4.0m^2/litre
Estimated system thickness	1.5 - 2.0mm

For fine texture

Talrakepoprime LV	5.5 - 6.5 m^2/litre
Talrakflorkote SF (base coat)	4.0m^2/litre @ 250 microns wft
Antislip Grain No 2*	1.25-3m^2/kg
Talrakflorkote SF (top coat)	4.0m^2/litre
Estimated system thickness	0.75 - 1.5mm

Note : Coverage figures given are theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be reduced, and may vary with site and application conditions.

Storage

Talrakflorkote SF has a shelf life of 12 months if kept in dry store in original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

Cleaning and disposal

Spillages of component products should be absorbed on to earth, sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packing should be in accordance with local waste disposal regulations.

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Precautions
Health & Safety instructions

Talrakflorkote SF, Talrakepoprime LV and Talrasol GP should not come in contact with skin and eyes or be swallowed. Avoid prolonged inhalation of solvent vapours. Some people are sensitive to epoxy resins, hardeners and solvents. Gloves, goggles and a barrier cream should be used. Ensure adequate ventilation and if working in enclosed areas, use suitable breathing apparatus. If mixed resin comes into contact with the skin, it must be removed before it hardens with a resin removing cream followed by washing with soap. Should accidental eye contamination occur, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

Fire

Talrakepoprime LV and Talrasol GP are flammable. Do not expose to naked flames or other source of ignition. No smoking during use. Containers should be tightly sealed when not in use. In the event of a fire, extinguish with CO_2 or foam.

Flash points

Talrakepoprime LV : 57°C

Talrasol GP : 33°C

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