

APFLOOR SL 500

4 Component, solvent free, self-smoothing epoxy flooring

Description

APFLOOR SL 500 is an epoxy self-levelling flooring based on liquid epoxy resin cured with a typical grade of cycloaliphatic amine. It is supplied in pre-weighed packs, ready to mix and use and imparts a smooth glossy surface. It is available in all Ral Shades.

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Uses

APFLOOR SL 500 is used in wide industrial segments such as :

- Food
- Automotive
- Pharma
- Light engineering
- Health care
- Breweries

Key features

Excellent adhesion

Excellent self levelling properties

Good chemical resistance

Good abrasion resistance

[illegible]

Properties

Type	: Epoxy cyclo-aliphatic amine	Mixing ratio	: Pre-weighed packs
Finish	: Smooth	Colour	: Available in RAL shades
Pot life @ 27°C ASTM D 2471	: ≥ 55 minutes	Recommended WFT ASTM D 4414	: 500 microns
Drying time ASTM D 1640		Recommended DFT ASTM D 7091	: 500 microns
Surface dry	: ≥ 3 hrs		
Tack free dry	: ≥ 7 hrs		
Hard dry	: ≥ 24 hrs		
Recommended thinner	: PUT 502 (Clean up)	Shelf life	: 12 months in the unopened container

Performance data

The mandatory performance parameters as per FeRFA and EFNARC guidelines for resin flooring system

Pull of adhesion test ASTM D 7234-2022	: ≥ 2 MPa for M20 grade concrete / Concrete failure
Impact resistance ASTM D 2794 1993	: 7.84 N.M.

Abrasion resistance : Maximum 50 mg loss
ASTM D 4060-2019

Other mechanical properties

Flexural strength	: 7 N/mm ²
ASTM D 790-2017	
Tensile strength	: 13 N/mm ²
ASTM D 638-2014	
Shore D	: ≥ 46
ASTM D2240-2015	

Slip resistance - dry condition : 45 - 50 (low risk of slip)
EN 13036-4:2011

Note : The typical physical properties given above are derived from tests conducted in a controlled laboratory environment. However, the tests of field-applied samples may vary in results, depending on site condition and application methodology employed.

Chemical resistance

Excellent resistance is observed against distilled water, detergent solutions, alkalis and acids. Chemical spillages should be wiped off quickly and not be allowed to become a concentrate by evaporation. The details of the chemicals which are resistant to APFLOOR SL 500 are available on request.

Application instruction:

Surface preparation

The long-term durability of the applied APFLOOR SL 500 flooring is dependent on the adhesive bond achieved between the flooring material and substrate. Concrete should be cured for at least 28 days to reach the residual moisture within the acceptable limit of 4-5%. The preferred concrete strength is in the range of 20-25 MPa. The rising moisture vapour emission rate must not exceed 14-15 gms per sqm over a 24-hour period as measured by calcium chloride method, ASTM F 1869. Surface preparation like grinding or shot blasting is done to achieve a surface profile of 150-200 microns. The recommended surface profile is SP-2 (Reference ICRI technical guideline No: 03732). Conduct CDS (Clean, Dry and Sound) tests on the substrate before applying the primer. All substrates should be sound and free from contaminations such as mortar, curing compound residue, oil, or grease. Excessive laitance should be removed by light mechanical scrubbing, grinding or grit blasting. Oil and grease contamination must be completely removed by degreasing chemicals.

Priming

Mix APFLOOR EP 15 Resin and APFLOOR EP 15 Hardener in equal proportions by volume. Solvent or thinner should not be added. A forced action mixer with a paddle fitted into a heavy duty, slow speed electric hand drill is recommended for mixing. The material is poured onto the prepared substrate and spread to the required thickness with a roller. Allow to cure for 6-8 hours. Porous floors may require two coats of primer. Inter-coating window time should not exceed 24 hours. In case the over coating window exceeds 24 hours, grinding is necessary to get mechanical anchoring, before the second coat is applied.

Mixing & Application

APFLOOR SL 500 is supplied in pre-weighed packs ready to use on site. Unpack Resin and add to a clean mixing bowl. Add hardener, EPI and aggregates slowly under stirring and continue mixing for 3-4 minutes. Pour the mix on to the floor and spread to a thickness of 1 mm with a notched trowel. The surface is then de-aerated with the aid of spike roller to dislodge air pockets. Avoid excess spike rolling. Allow to cure for 24 hours. Solvent or thinners should not be added to APFLOOR SL500.

Packaging and Theoretical Coverage

APFLOOR SL 1000	:	Pre-weighed set of 13.2. kg (clear set)	:	1 set cover 18 sqm @ 0.5mm
EPI - pigment for top coat	:	Available in 800 gms packing, to be mixed with APFLOOR SL 500		

APFLOOR 15 : Resin and Hardener available in 20 & 6 KG : 1 KG covers 5 sqm @ 200 microns packing

Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well-ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Ideal temperature for storage of the material is 25°C to 30°C, in a covered shed.

Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. In case of splashes on the skin, dampen the cloth with thinner PUT 503 and wipe the hands with the cloth. Wash then with soap

Do's

Clean regularly

Remove aggressive chemical spillage immediately

Maintain wheels for proper rolling. Nylon / teflon wheel trolleys are recommended

Handle heavy material gently and cautiously

Oil or fat spillages should be cleaned immediately, as it may cause slip and fall.

Don't

Drag any sharp or heavy object

Use metal wheels

Expose to fire or welding sparks

Expose to very high temperature than the limits recommended by the manufacturer

Drop down any heavy material on the floor

Expose to highly corrosive chemicals

Limitations

Self-smoothing is a term used in the flooring industry to describe a composition which after being spread to a uniform layer of 1 mm thickness, develops a smooth, resin-rich surface. This self-smoothing action is very localized and does not eradicate irregularities of level present in the original substrate. It is most important, therefore, that adequate surface preparation and floor repair is undertaken prior to application. This product is not advised to apply over asphalt, unmodified sand-cement screeds or PVC tiles and sheets. Nails, sharp objects protruding from machinery, packings, or trolleys moving on the floor, presence of sand etc may cause scratches on the coating. The product is not advised to apply at below 15°C temp. Application at above 35°C will shorten pot life. Cured product is not suitable for exposure to sub-zero temperatures or above 65°C. Excess spike rolling will cause roller marks. This product is not suitable for areas exposed to direct sunlight.