

UNICHEM FLOOR ESL

SELF LEVELLING EPOXY FLOOR SYSTEM

UCA/EP/FSL-001

DESCRIPTION

UNICHEM FLOOR ESL is a two pack solvent free epoxy system consisting of base and hardener. Hard wearing aggregates for non-skid application and graded inert fillers for self-leveling screed applications are provided separately for use in **UNICHEM FLOOR ESL** system. It can be applied from thickness of 1 mm upto 10mm depending on the procedure adopted.

USES

UNICHEM FLOOR ESL is ideal for industrial or commercial locations where a hard wearing, hygienic, dust free environment is important e.g. laboratories, hospitals clean rooms, electronic assembly plants, switchgear plant rooms, light industrial plants, schools, carparks, car-showrooms etc.

Using **UNICHEM FLOOR ESL** it is possible to produce seamless self levelling epoxy paint, multi layer screeds, self levelling screeds and non-skid finishes

ADVANTAGES

Hygienic : It forms a dust free seamless floor which is Easy to clean

Economy : Faster to lay than epoxy screeds. Over 300 m²/day with an experience team.

Durability : Withstands foot and light vehicular traffic and has a good abrasion resistance.

Chemical Resistance : Very good resistance to industrial chemicals.

Solvent free : Low odour formulation

TYPICAL PROPERTIES

Cure Characteristics	30° C
Pot Life	20-30 minutes
Initial Cure (foot traffic)	18 hrs.
Heavy Traffic	48 hrs.
Full Cure	7 days

Physical Properties

Thickness coat	1-2mm/
Compressive strength (BS 6319)	55 N/mm ²
Flexural strength (BS 6319)	35 N/mm ²
Impact resistance	Excellent
Tensile Strength (BS 6319-7)	20 N/mm ²

Bond Strength to primed concrete (pull of test):
Greater than strength of concrete substrate.

For Self Leveling Screed

Pot Life @ 30° C : 45 minutes

Compressive strength (**ASTM C-579**) : 60 N/mm²

Flexural strength (**ASTM C-580**) : 30 N/mm²

CHEMICAL RESISTANCE PROPERTIES

UNICHEM FLOOR ESL has excellent resistance to a wide range of industrial chemicals. Specific data can be furnished on request

APPLICATION

UNICHEM FLOOR ESL can be applied by specialist contractors who follow the procedures stated in this catalogue.

UNICHEM have trained applicators who understand the correct installation procedures. The complete applications would normally take 2 to 3 days to complete. All existing expansion or movement joints should be followed through the new floor. All Joints should be cleaned and prepared well.

Surface preparation: Surface preparation must be thorough. Light mechanical surface scarifying or captive blasting is preferred. Acid etching as a preparation technique is only acceptable where access to mechanical equipment is not possible, Chemical degreasers are only recommended for the removal of light oil contamination followed by mechanical treatment. New concrete must be cured for at least 21 days and have a moisture content of less than 5% before topping with **UNICHEM FLOOR ESL**. The substrate should not suffer from rising damp conditions.

Smooth Self Leveling Epoxy Floor 1/2 to 2mm

Priming : Apply **UNICHEM PRIMER EP 100** and allow to cure for 8 to 24 hrs at 20° C and 4 to 16 hrs. at 35° C.

Mixing : **UNICHEM FLOOR ESL** is supplied in pre-weighed packs ready to use on site. **DO NOT** add solvents or thinners. Mix the base and the hardener components together in the mixing vessel using a forced action mixer or heavy duty slow speed drill and paddle until an even colour is obtained, continue mixing for 3-5 minutes.

Laying : Pour the mixed **UNICHEM FLOOR ESL** on to the primed substrate. Spread to the required thickness using a steel notched trowel with 4mm notches

Rolling : Rolling helps remove any slight trowel marks and air bubbles to be released. Use a spiked nylon roller immediately after laying. The rolling should be carried out using a back and forth technique along the same path. Subsequent paths should overlap the first by 50%. Between 30 and 60 minutes later (at 20° C) roll the surface again lightly to remove any other surface imperfections. Further light rolling may then be required if air release is still apparent in the surface. Light rolling can be carried out safely while a knife cut in the floor continues to heal within 3 minutes.

Non-Skid finish : A non skid finish may be, produced by sprinkling hard wearing specially graded silica sand. The rate of application will depend on the extent of surface roughness required. The silica sand may be supplied on request.

NOTE: In certain conditions a light oily film may appear on the surface of the floor during curing. This may be removed easily after curing for a minimum of 48 hours by washing with a mild detergent floor cleaner and water.

Multi Layer Screed

Priming : Apply **UNICHEM PRIMER EP 100** and allow to cure for 8 to 24 hrs at 20° C and 4 to 16 hrs. at 35° C.

Rolling : Roll using a spike roller to remove air entrainment and allow to cure.

Application :

- **UNICHEM FLOOR SL** base shall be mixed with hardener and then the filler in the recommended ratio stirred thoroughly by mechanical means until the mix becomes uniform before application.
- The first layer of the floor system should be spread homogenously to reach a thickness of 1.5 mm. Sprinkle silica sand (0.5 to 0.8 mm) in excess over layer of the first coat.
- The layer shall be cured for a minimum of 8 hrs.
- The excess sand shall be removed after curing.
- The second layer of multi layer shall be applied using the same procedure as the first layer and as recommended by the manufacturer.
- After full cure of the second layer, apply the finishing coat using a mix of base and hardener only and apply as done for 1/2 to 2 mm smooth self level epoxy application given above.

Self Leveling Epoxy Screed

Priming : Apply **UNICHEM PRIMER EP 100** and allow to cure for 8 to 24 hrs at 20°C and 4 to 16 hrs at 35° C.

Application : **UNICHEM FLOOR ESL**, base and hardner shall be mixed first and then with the filler In, the recommended ratio of upto 30 kg per pack and stirred thoroughly by mechanical means. The mix material is poured on to the primed surface and spread with a steel trowel to achieve a 5 mm seamless topping.

- Using a spiked roller, remove air entrainment and allow to cure.

Cleaning : Tools and equipment should be cleaned in **UNICHEM THINNER** immediately after use. Spillages should be absorbed with sand or saw dust and disposed of absorbed in accordance with local regulations.

PACKAGING & COVERAGE

UNICHEM FLOOR ESL 30 kg pack yields 16.5 litres. Aggregates for multi layer screeds and Self Leveling screeds are available separately in 25 kg bags.

Coverage: 7-8 m²/pack@2mm thickness

UNICHEM PRIMER EP 100 primer is available In 10 LTR and 20 LTR packing consisting of base and hardener. Coverage is 6 to 8 m² per kg.

STORAGE

In unopened packs **UNICHEM FLOOR ESL** has a shelf life of 12 months when stored in warehouse conditions below 35° C.

HEALTH & SAFETY

UNICHEM FLOOR ESL Base and Hardener, and **UNICHEM PRIMER EP 100** should not come into contact with skin or eyes or be swallowed. Avoid prolonged inhalation of vapours. Some people are sensitive to epoxy resins, hardeners and solvents. Gloves, goggles and barrier cream should therefore be used. Ensure adequate ventilation and if working in enclosed areas, suitable breathing apparatus is recommended.

If mixed resin comes in contact with skin it must be removed before it hardens with a resin removing cream followed by washing with soap and water. **DO NOT USE UNICHEM THINNER**. Contamination of skin with any of the above products should be removed immediately with soap and water. Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical advice immediately - **DO NOT INDUCE VOMITING**.