

DESCRIPTION

C-Floor E400 SL is a multifunctional self-levelling coating for floors with the following notable properties:

- An epoxy coating suitable for the preparation of self-levelling mortars mixed with appropriate silica's.
- Suitable for the preparation of thick mortars applied by float.
- Hard and resistant to abrasion.
- High resistance to wear and tear.
- High mechanical resistance.
- Resists splashes and small spillage of a wide range of chemical products.
- Provides smooth finishes and surfaces requiring cleaning.
- Available in the Colormix Industrial System (ICS).
- Fire retardant.
- CE Marking product.

MAIN APPLICATIONS

C-Floor E400 SL is used to protect concrete flooring in industrial plants and warehouses, commercial establishments and other areas where a smooth, resistant and washable surface is required. It can provide non-slip finishes on floated mortars with high mechanical resistance and self-levelling mortars. Can also be used as a basis for schemes using natural silica Quartz G800 AGS and coloured silica's. For specific recommendations consult Customer Service.

PROPERTIES

Finish	Gloss
Colour	RAL colours ^{b)} : Other colours: on request
Components	2
Mixing ratio (by weight)	Resin: 7F-401 3 parts Cure: 7F-402 1 part
Pot life of the mixture	45 minutes at 20°C The pot life of the mixture depends on temperature and quantities mixed.
Volume solids	100% approx.
Specific gravity	1,33 g/ml
Recommended thickness (dry)	1,5 to 3 mm (as a self-levelling mortar) .
Nº of coats and theoretical coverage	See application. Consider the application losses, surface irregularities, etc.
Application method	Roller and toothed spatula.

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7F-400 C-FLOOR® E400 SL
Multifunctional self-levelling coating for floors

Revision: May 2016

Drying time

At 20°C and 50% of relative humidity:

Light traffic :	2 days
For human traffic and light loads:	4 days
Fully cured:	7 days
Recoating:	1 - 2 days

Drying times depend on air temperature and ventilation.

SURFACE PREPARATION

Types of surface: concrete and cement mortar.

Surfaces must be clean, dry and with suitable roughness, prepared by using of shot blasting, mechanical cleaning using a multi-purpose machine with diamond discs (or other type of abrasive) or milling.

The concrete will need to be cure for at least 28 days before the application the C-Floor E400 SL system and have a minimum compression resistance of 25 N/mm² and tensile strength of de 1.5 N/mm².

The surface must be free from laitance, oils, grease or other contaminants. Where there are superficial contaminations, mechanical preparation with diamond discs must be carried out, followed by an immediate application of one coat of C-Floor Sealer E140. Where there is in-depth contamination, various techniques can be used: high pressure steam cleaning with caustic soda; shot blasting the floor, followed by an immediate application of an epoxy sealer. Residual contamination must be burnt off (HCA cleaning), followed by an immediate application of C-Floor Sealer E140.

On very porous and absorbent surfaces, after cleaning the floor, the adhesion primer C-Floor Sealer E140 or C-Floor Varnish E420 QS must be applied. If the surface is very irregular, fill the cavities with an epoxy mortar consisting of a mixture of C-Floor Sealer E140 and a mixture of Quartz G800 AGS : Quartz G450 (ratio by weight 1:1), with a ratio by weight of coating:silica of 1:6. After these repairs, the floor must be covered with a thin levelling mortar made by 1 part by weight of C-Floor Sealer E140 or C-Floor Varnish E420 QS and 0.3 to 0.5 parts by weight of a mixture of Quartz G300 : Quartz Powder G50 (1/1).

PREPARACION AND APPLICATION

Before application, the colours made in ICS system should have a minimum stabilization time of 24 hours. For the preparation of the product should be used a low speed drill (up to 400 rpm) and a paddle specially designed to entrap as little air as possible. Previously mix the Resin and then add the Cure to the Resin and stir for 5 minutes. To ensure a perfect mix, pour the components into another container and mix again for 1 to 2 minutes. In enclosed areas there must have good ventilation during application and drying until the solvents have evaporated.

Ambient application conditions:

Temperature	10 - 45°C
Relative humidity	less than 80%
Surface temperature	3°C above dew point at a minimum temperature of 10°C
Material temperature	15 - 25°C
Concrete humidity	less than 4% according ASTM F2659 (with a "Tramex" type equipment)

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Application equipment

Roller	Antidrop
Toothed spatula	2 – 6 mm (according to the project and the desired hickness)

Thinner

7S-902.0001 (Dil. CP-40)

Cleaning thinner

7S-902.0001 (Dil. CP-40)

ADDITIONAL INFORMATION
Drying mechanism – By solvent evaporation and chemical reaction between the components

Volatile Organic Compounds (VOC)

UE limit for the product (cat. A/j): 500 g/L

Maximum VOC content 223 g/L*

Supplying form: 191 g/L *

*) The VOC value shown above refers to a ready for use product, as tinted, thinned, etc in accordance with our recommendations. We are not responsible for products obtained by mixing products with are different from those we have recommended and we must draw attention to the responsibility of anyone involved within the supply chain not to infringe Directive 2004/12/CE.

Flashpoint (EN 456)

Resin	126°C
Cure	131°C
Thinner	16°C (7S-902.0001)
Cleaning thinner	16°C (7S-902.0001)

Supply form

Resin	15 kg
Cure	5 kg

Shelf life

Resin: 2 years, when stored in original containers, indoors, between 5 and 40°C.

Cure: 3 years, when stored in original containers, indoors, between 5 and 40°C.

PAINT SYSTEMS
SEALING WITH C-FLOOR® SEALER E140
On smooth surfaces

 Apply cross coats with a roller at a rate of 300 to 500 g/m². According to the absorption of the surface and its porosity, it may be necessary to apply extra coats to seal the surface completely.

On very porous, rough and irregular surfaces

The existing cavities and irregularities can be effectively filled by applying, with a flat spatula, a fine mortar consisting of 1 part by weight of C-Floor Sealer E140 and 0,3-0,5 parts by weight of a mixture of Quartz G300 : Quartz Powder G50 (1 : 1). On critical situations, it is recommended to add about 1% of C-Floor Thickener Additive to the C-Floor Sealer E140 to increase the sealing capacity of the pores. Alternatively, you can use a sealer with higher viscosity, C-Floor Varnish E420 QS, to make the fine mortar. Due to the high viscosity of this sealer, the proportions of silica:varnish should be adjusted.

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Revision: May 2016

The ratio coating:silica, as with the ratio of the mixture of silica and silica powder, depends on the roughness of the substrate. The applicator must decide which suitable ratios should be used to ensure a completely sealed surface. Before applying the self-levelling mortar, it is very important to make an inspection of the surface to evaluate the surface sealing. It may be necessary to apply an extra coat to ensure that the surface is completely sealed.

Coating consumption: 1 kg/m²/mm (varies according to the irregularity of the substrate and application method).

The C-Floor E400 SL must be applied after an interval of 4 to 24 hours that depends on the ambient conditions. If recoating cannot be done within 24 hours, it is recommended to do a general mechanical sanding of the primer before applying the final coat. In this case, it may be necessary to apply an additional coat of primer in order to fill some pores created by mechanical sanding.

**FINISHES WITH
C-FLOOR® E400 SL****As coating**

Application by roller or toothed spatula.

When applied by spatula, approximately 15 minutes after application, run a spiked roller over the surface to eliminate air bubbles. When applied by roller, dilute the product with 5% of thinner.

Coating consumption (roller): 0,2 - 0,30 kg/m²/coat

Coating consumption: 1,33 kg/ m²/ mm

As self-levelling mortar

Mix 1 part by weight of C-Floor E400 SL with 0,6 – 1,0 part of silica Quartz G300 or other silica's of granule size 0,1 – 0,3 mm. Drop the mortar over the surface and spread it with a toothed spatula of the desired thickness. Approximately 15 minutes later, run the spiked roller over the areas applied to eliminate the air bubbles.

To achieve a decorative effect with Flakes A020 or other similar flakes, these must be sprinkled over the C-Floor E400 SL after the final use of the spiked roller.

Mixture consumption: 1,9 – 2,1 kg/m²/mm

Coating consumption: 1,0 – 1,2 kg/m²/mm

As a non-slip coating of fine rugosity

Apply 1 layer of C-Floor E400 SL + Quartz G300, in the ratio of 1:0,4, with a toothed spatula and run the spiked roller for levelling the product. Approximately 15-20 minutes later sprinkled slowly with silica Quartz G450 until saturated. After 24h remove the non-adherent silica and apply one layer of C-Floor E400 SL diluted at 5% with a rubber spatula followed by an anti drop roller cross coats to uniformly spread the product.

Consumption of basecoat: 0,6 – 0,8 kg/m²

Silica consumption: 2,5 – 3,5 kg/m²

Consumption of topcoat: 0,4 – 0,5 kg/m²

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As a non-slip coating of fine rugosity with UV resistance

Apply 1 layer of C-Floor E400 SL + Quartz G300, in the ratio of 1:0,4, with a toothed spatula and run the spiked roller for levelling the product. Approximately 15-20 minutes later sprinkled slowly with silica Quartz G300 until saturated. After 24h remove the non-adherent silica and apply one layer of C-Floor PU320 HB with a rubber spatula followed by an anti drop roller cross coats to uniformly spread the product.

Consumption of basecoat: 0,6 – 0,8 kg/m²Silica consumption: 2,5 – 3,5 kg/m²Consumption of topcoat: 0,30 – 0,40 kg/m²**As a non-slip coating of high rugosity**

Apply 1 layer of C-Floor E400 SL + Quartz G300, in the ratio of 1:0,4, with a toothed spatula and run the spiked roller for levelling the product. Approximately 15-20 minutes later sprinkled slowly with silica Quartz G800 AGS until saturated. After 24h remove the non-adherent silica and apply one layer of C-Floor E400 SL diluted at 5% with a rubber spatula followed by an anti drop roller cross coats to uniformly spread the product.

Consumption of basecoat: 0,6 – 0,8 kg/m²Silica consumption: 2,5 – 3,5 kg/m²Consumption of topcoat: 0,6 – 0,8 kg/m²**As a base for schemes using coloured and natural silica's**

Apply 1 layer of C-Floor E400 SL ^{d)} + Quartz G300, in the ratio by weight 1:0.4, applied by a toothed spatula and run the spiked roller for levelling the product. Approximately 15-20 minutes later sprinkled with silica Quartz G800 AGS or coloured silica's until saturated. After 24h remove the non-adherent silica and apply one layer of C-Floor Coating E420 QS with a rubber spatula.

Consumption of C-Floor E400 SL: 0,6 – 0,8 kg/m²Consumption of Quartz G800 AGS or coloured silica's: 2,5 – 3,5 kg/m²Consumption of C-Floor Varnish E420 QS: 0,4 – 0,6 kg/m²**Epoxy mortar with high mechanical resistance (5-8 mm)**

Apply 1 coat of C-Floor Sealer E140 sprinkled with Quartz G800 AGS.

Apply 1 layer of C-Floor E400 SL + silica mixture (eg: Quartz G800 AGS + Quartz G450 + Quartz G300) in the ratio by weight 1:10 (sealer:silica).

Apply 2 coats of C-Floor Coating E420 QS to seal the mortar. The coating for the first coat must be prepared with 1,5% of C-Floor Thickener Additive and applied with a rubber spatula. The second coat can be applied with either a rubber spatula or a roller.

Consumption of C-Floor Sealer E140: 0,3 – 0,4 kg/m²/mmConsumption of C-Floor E400 SL: 0,24 – 0,26 kg/m²/mmConsumption of C-Floor Varnish E420 QS (1st coat): 0,7 – 0,8 kg/m²Consumption of C-Floor Varnish E420 QS (2st coat): 0,4 – 0,5 kg/m²Silica consumption: 2,4 – 2,5 kg/m²/mm

For a matt finish apply 2 coats of C-Floor Varnish PU385 Matt ^{c)}.

Varnish consumption: 0,14 – 0,16 kg/m².

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COVINGS SCREED**Smooth finish***Sealer*

First apply one coat of C-Floor Sealer E140.

Consumption: 0,2 – 0,3 g/m²

Mortar

Immediately after the sealer prepare the C-Floor Sealer E140 with 2% by weight of C-Floor Thickener Additive. Due to the very low density of this thickener, it must be incorporated using a slowly rotating mechanical drill. Prepare a mortar of this mixture with Quartz G300, in a ratio by weight coating:silica of 1:10 and apply the mortar with a coving trowel.

Consumption of sealer: 0,23 – 0,25 kg/m²/mm

Consumption of silica: 2,3 – 2,4 kg/m²/mm

Finish

After 16 hours of mortar application, prepare the C-Floor E400 SL with 2% by weight of C-Floor Thickener Additive and apply the product with a brush.

Consumption of coating: 0,6 – 0,8 kg/m²/mm

Scheme for natural or coloured silica's

Apply the sealer and mortar as referred in the previous system.

Base for schemes with natural and coloured silica's

After 16 hours of mortar application, prepare the C-Floor E400 SL^d with 2% by weight of C-Floor Thickener Additive and apply the product with a brush. Sprinkle while damp with natural silica's Quartz G800 AGS or coloured silica's until saturated.

Coating consumption: 0,6 – 0,8 kg/m²

Silica consumption of Quartz G800 AGS or coloured silica's: 2,5 – 3,0 kg/m²

Finish for schemes using natural and coloured silica's

After 24 hours, prepare C-Floor Varnish E420 QS with 0,5% by weight of C-Floor Thickener Additive and apply the product by brush.

Consumption of varnish: 0,4 – 0,6 kg/m²

CERTIFICATES AND MECHANICAL PROPERTIES**Fire Reaction**

C-Floor E400 SL is classified with fire reaction B_{fl} - s1 in accordance with Norm EN 13501-1.

Abrasion resistance

C-Floor E400 SL is certified as wear resistance according with EN 13892-4:2003, class AR 0,5 and a Taber abrasion resistance of 80 mg (CS10, 1000 cycles, 1000g) according to ASTM D4060.

Anti-slip properties according ENV 12633

Slip resistant with Class 0 for smooth finish systems with or without a matt polyurethane finish.

Slip resistant with Class 3 for the non-slip coating system of fine and high rugosity.

Complies with the general requirements applicable to food companies, according Annex II, Cap. I and II of CE Regulations nº 852/2004 from European Parliament and Council of 29.02.2004.

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NOTES

- a) Although C-Floor E400 SL has good resistance to abrasion when applied to floors, it suffers greater or lesser damage depending on the intensity and type of traffic to which it is exposed. To increase resistance to wear, we recommend the application of 2 coats of matt polyurethane coating C-Floor Varnish PU385 Matt or another recommended coating. Alternatively, suitable waxes can be used for protection and maintenance (e.g Jontec Matt F2f)
- b) Due to slight colour variations may occur from batch to batch, it is recommended to be used a single batch on the same application area. The addition of silica's causes slight colour variation of the product.
- c) The matt coating C-Floor Varnish PU385 Matt causes slight colour variation of the product.
- d) This product must be used in the colour closest to the natural or coloured silica's.

CHEMICAL RESISTANCE TABLE

Tests made according EN ISO 2812-3. Drying conditions: 1 week at 20°C and 50% RH. The chemical resistance results are only valid for the drying conditions and the above test method. For other conditions, chemical resistance results may be different.

	2 hours	1 day	1week
Sulphuric acid (10%)	±	-	-
Acetic acid (10%)	±	±	-
Sodium hydroxide (10%)	+	+	+
Sodium hypochlorite (2,5%)	+	+	+
Engine oil	+	+	+
Brake fluid	+	+	+
Antifreeze	+	+	+
Gasoline	+	+	+
Lead-free gasoline	+	+	+
Xylene	+	+	+
Ethanol	±	±	±
Water	+	+	+

+ Resistant ; ± Partly resistant ; - Not resistant

CE MARKING

CE Marking of this product is the evidence given by CIN that this product is subject to the provisions of Community Directives of the Construction Products that are applicable with European Regulation nº 305/2011 on March, 9 of 2011 and the European Standard EN 13813. "Screed material and floor sounds – Sound material - Properties and requirements" ". This product conforms to the requirements of Annex ZA of that that standard.

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14	
EN 13813	
Continuous floor coating Declaration of Performance: CE 7F400	
Classification	SR - B _{fl} -s1 – B1,5 – AR0,5 – IR10
Adhesion test	> 1,5 N/mm ²
Fire reaction	B _{fl} -s1
Impact resistance	>10 Nm
Abrasion resistance	AR0.5

HEALTH, SAFETY AND THE ENVIRONMENT

Protect the eyes and skin from contact, gloves, goggles and appropriate clothing should be worn. Keep out of the reach of children. Use only in well ventilated areas. Do not empty into drains. Keep the container properly sealed and stored in the correct place. Take correct measures when transporting the product so as to avoid any accidents that could rupture the can or cause damage to the packaging. Ensure that the container is correctly stacked in a safe area. Do not store or use the product in extreme temperature conditions. Always take account of the appropriate legislation relating to the environmental and Health and Safety at Work. For more information it is essential to read the label on the container and the Material Safety Data Sheet of this product, its components and all complementary products referred on this Technical Data Sheet.

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