



CEM-O-LUX

Mono-component coloured enamel for concrete floors, drive-over

CE marking:

- EN 13813 - Designation: SR-B2.0-AR0.5-IR10



TECHNICAL SPECIFICATIONS



FIELD OF APPLICATION



APPLICATIONS



Description

CEM-O-LUX is a coloured enamel formulated with non-yellowing thermoplastic resins dissolved in a solvent with extremely low odour, prepared in two different formulations to be applied in two coats: PRIMER and TOP COAT. When applied to cement surfaces CEM-O-LUX creates an aesthetic protective coloured coating with the following characteristics:

- Matt.
- High hardness.
- Firmly bound to the substrate.
- Water-repellent and resistant to oil and tyres.
- Applicable indoors and outdoors.
- Becomes rapidly resistant to rain (12 hours when applied at +30°C).

CEM-O-LUX acts as a:

- Impregnating and consolidating agent for porous cement surfaces.
- Coloured anti-dust coating.

Besides this, CEM-O-LUX protects cement surfaces against decay factors such as:

- Carbonation, preventing the diffusion through the solid matrix of carbon dioxide.
- Wash-out effect of rainwater.
- Corrosion, limiting the penetration of aggressive substances (chlorides and sulphates).
- Stains and dirt adhesion (grease, oil and tyre marks).
- Wear and abrasion.

CE marking

► EN 13813

CEM-O-LUX (PRIMER + TOP COAT cycle) complies with the principles defined in the EN 13813 standard ("Screed material and floor screeds - Screed materials: Properties and requirements") with the following designation:

→ SR-B2.0-AR0.5-IR10

- Synthetic resin screed (SR)
- Bond strength: > 2.0 MPa (B2.0)
- BCA wear resistance:
- Impact resistance: 10 Nm (IR10).

Colour

CEM-O-LUX is available in 1 kg do-it-yourself KITS with PRIMER + 1.5 kg TOP COAT in the following colours:

- GRIGIO FINESTRA
- VERDE OSSIDO
- ROSSO OSSIDO
- TABACCO

CEM-O-LUX

CEM-O-LUX is also available in packages for professional use in various colours on request (contact the Nord Resine Technical Service), including the standard colours.

Field of application

CEM-O-LUX is used as a stain-proofing and anti-wear protective treatment for cement floors in:

- Garages, car parks and private parking areas for vehicles.
- Cement pavements.
- Cement walls and cords.
- Floors of industrial sheds used as depots.
- Store rooms and attics.

Advantages

- CEM-O-LUX is inexpensive (high coverage in m² per kg of product applied).
- CEM-O-LUX is easy to apply (it can also be sold for DIY applications) and guarantees excellent results at the end of the application.
- CEM-O-LUX withstands rising damp on the surface to which it is applied.
- CEM-O-LUX is available in 4 colours (DIY packs) or in the colours on request (professional-use packs).
- CEM-O-LUX is drive-over.

Specific preparation of the laying support

► New industrial cement floor

- Especially outdoors, verify that the surface has not been coated with a paint to aid concrete curing ("Concrete Curing Membrane" or "Concrete Curing Compound").

If positive, remove the film by scraping or sanding.

- Remove any traces of oil/grease by washing with STRIPPER.
- If the concrete surface has an excessively polished finish, roughen it with an acid wash using NORDECAL FORTE GEL (see instructions in the Technical Sheet).
- If the floor was subjected to a general power wash, wait a few days until the surface is perfectly dry before proceeding with the application of CEM-O-LUX PRIMER.
- Seal any cracks and joints using the bi-component epoxy filler PLAST EPO (see Technical Sheet for the application details).
- Always remove the dust before proceeding with the application of CEM-O-LUX PRIMER.

► Old industrial cement floor

- Remove any traces of oil/grease by washing with STRIPPER.
- Wait until the surface is perfectly dry before proceeding with the application of CEM-O-LUX PRIMER.
- If the concrete surface has an excessively polished finish, roughen it with an acid wash using NORDECAL FORTE GEL (see instructions in the Technical Sheet).
- Repair any holes or chipped parts with MALTAFIX, a specially formulated rapid-setting product containing cement and fillers (see Technical Sheet).

Wait 24–48 hours before proceeding.

- Always remove the dust before proceeding with the application of CEM-O-LUX PRIMER.

► Screeds or sand and cement tamped coverings

- Remove the dust and check that the surface is hard and compact.
- If the surface chalks not only superficially, but also in depth, consolidate it with CONSOLID PU.
- If the chalking is only superficial, apply CEM-O-LUX PRIMER which will itself act as a consolidating agent.

► Concrete floor or screed already coated

- Remove the existing paint completely since CEM-O-LUX is not suitable for being applied on treated surfaces.
- Always remove the dust before proceeding with the application of CEM-O-LUX PRIMER.

► Cement floor with a few traces of rising damp

- Perform a thorough acid wash with NORDECAL FORTE GEL (see instructions in the Technical Sheet).

CEM-O-LUX

- Rinse the surface and completely remove the wash liquid, making sure that no water collects in the zone to be treated.
- Wait one day for the floor to dry completely.
- Apply one coat (roughly 200 g/m²) of NORDRY 200 P (see details in the Technical Sheet) using a short-bristle roller for solvents, by insisting in particular on the zones with traces of dampness.
- Wait for the solvent to evaporate from the surface, but NOT for the complete curing of the hydrophobicising treatment (NORDRY 200 P).

To this aim, we recommend waiting at least 2 hours (with high temperatures) to maximum 6 hours (with low temperatures), but never more than 8 hours, after which the surface will become non-absorbent.

- Proceed with the application of CEM-O-LUX PRIMER.

Preparing the product

- ▶ Instructions valid for both CEM-O-LUX PRIMER and CEM-O-LUX TOP COAT
- The CEM-O-LUX PRIMER and TOP COAT products are ready-to-use.
- Homogenise the product by vigorously shaking the closed can for a few seconds or thoroughly mixing it with a spatula or other suitable tool until obtaining a uniform colour.
- In case of packages for professional use, mix using a low-speed professional mixer.
- CEM-O-LUX can be poured directly on the surface to be coated or in a service container with adequate size for immersing the roller.

Application of the product

- ▶ Application of CEM-O-LUX PRIMER
- The product can be applied using a 25 cm SHORT-BRISTLE ROLLER resistant to solvents.
- Pour CEM-O-LUX PRIMER directly on the support or draw it with a roller from a suitable service container.
- Apply the product with a roller, covering the entire surface three times with criss-cross strokes, making sure that the support is uniformly impregnated.
- Avoid stagnation of the product.
- If small surfaces (walls, cement cords, etc.) must be treated, it is possible to apply CEM-O-LUX PRIMER with a block brush.

▶ Curing of CEM-O-LUX PRIMER

- Aerate the rooms once the surface of CEM-O-LUX PRIMER is dry, that is, when the layer of glossy paint becomes matt.

If the ventilation occurs before (with the product still wet), the rapid evaporation of the solvent does not allow for eliminating the bubbles that form on the surface during the application.

- Before applying CEM-O-LUX TOP COAT, wait for the CEM-O-LUX PRIMER to be treadable.

Table 1 shows the minimum walk-over times in relation to the application/curing temperature.

Temperatura di applicazione/maturazione[°C]	Tempo minimo per la pedonabilità [ore]
+5°C	8
+23°C	5
+30°C	3

Tab. 1: minimum walk-over time for CEM-O-LUX PRIMER depending on the temperature.

▶ Application of CEM-O-LUX TOP COAT

- The product can be applied using a 25 cm SHORT-BRISTLE ROLLER resistant to solvents.
- Pour CEM-O-LUX TOP COAT directly on the support to be coated.
- Apply the product with a roller, covering the entire surface three times with criss-cross strokes, making sure that the support is uniformly coated.
- Avoid stagnation of the product.
- If small surfaces (walls, cement cords, etc.) must be treated, it is possible to apply CEM-O-LUX PRIMER with a block brush.

CEM-O-LUX

► Curing of CEM-O-LUX TOP COAT - Use of surfaces

- Wait until the TOP COAT can be walked on before performing other operations (for example, protection with wax). Table 2 shows the minimum walk-over times in relation to the application/curing temperature.

Temperatura di applicazione/maturazione [°C]	Tempo minimo per la pedonabilità [ore]
+5°C	24
+23°C	10
+30°C	6

Tab. 2: minimum walk-over time of CEM-O-LUX TOP COAT depending on the temperature.

- The minimum transit time for vehicles (drive-over) on CEM-O-LUX depends on the curing temperature of the treated surface.

Table 3 shows the minimum drive-over times in relation to the application/curing temperature.

Temperatura di applicazione/maturazione [°C]	Tempo minimo per la pedonabilità [ore]
+5°C	24
+23°C	10
+30°C	6

Tab. 3: minimum drive-over time of the CEM-O-LUX package after the application of the FINISH on the basis of the temperature.

► Protection of CEM-O-LUX with CEM WAX

- To enhance the durability and improve cleaning of the CEM-O-LUX coating made in INTERIORS, we recommend applying CEM WAX.
- CEM WAX is a ready-to-use wax in aqueous emulsion (in bottles equipped with a handy sprayer) that is highly resistant to scratching, semi-glossy and easily renewable (see specific Technical Sheet).
- The treatment with CEM WAX must be completed at least 24 hours after the application of CEM-O-LUX TOP COAT.

Consumption

The 2.5 kg kit (1 kg of CEM-O-LUX PRIMER + 1.5 kg of CEM-O-LUX TOP COAT) is sufficient for treating a surface measuring roughly 8 m².

type of application	minimum consumption	maximum consumption	UoM	dilution
PRIMER	0,12	0,13	kg/m ²	-
TOP COAT	0,18	0,19	kg/m ²	-

Cleaning of tools

- Wet product: clean with ACETONE or nitro thinner.
- Hardened product: remove mechanically, soak in solvents (acetone or nitro thinners) or use paint strippers (FLUID STRIPPER or GEL STRIPPER).

Useful application tips

- Vigorously shake the containers for a few seconds before opening them and shake them again from time to time during the application.
 - Do not apply if rain is imminent or forecast.
- Protect CEM-O-LUX against rain in the first 12 hours at +30°C and in the first 24 hours at +5°C.
- Do not apply with relative humidity above 85%.
 - For the application, the temperature must be at least 3°C higher than the dew point, and never less than +5°C.
 - Aerate the rooms once the product can be treaded over.

CEM-O-LUX

- The product is flammable.
- The product is dangerous, adopt suitable precautions and use the PPE specified in the Safety Sheet under point 8.
- Read the Safety Sheet carefully before using the product.
- When applied in poorly aerated areas, it is advisable to adequately ventilate the environment and protect the airways using a dust mask equipped with A organic vapour filters (brown strip) or combined ABEK filters (brown-yellow-grey-green strip), as per the EN 141 standard.

Maintenance

► Routine cleaning of CEM-O-LUX

- The ideal product for cleaning surfaces treated with CEM-O-LUX (with or without CEM WAX) is CEM CLEANER diluted in water 1:5 by volume (1 litre of product in 5 litres of water).
- Clean using a scrubbing brush, multi-purpose cloth, industrial floor cleaning machine (also scrubber-dryer machine) or single-disc floor scrubber fitted with a white Scotch Brite® disc.
- Rinse with water (preferably lukewarm).

► Removal and reapplication of CEM WAX

- The removal of CEM WAX becomes necessary when the wax layer can no longer be refurbished. In this case, we recommend not using dewaxing agents formulated with solvents, as they can damage CEM-O-LUX.
- The ideal product for removing CEM WAX is STRIPPER PLUS (see Technical Sheet) diluted between 1:6 and 1:8 by volume with lukewarm water.
- Reapply CEM WAX only after thoroughly rinsing and carefully drying the surface.

Technical data

► PRODUCT IDENTIFICATION DATA (CEM-O-LUX PRIMER)	UoM	value
Density at 20°C, EN ISO 2811-1	kg/L	1,006 ± 0,005
Kinematic viscosity (ISO cup 6, 23°C), EN ISO 2431	s	55 ± 3
Appearance	-	Coloured liquid
Odour	-	Of organic solvents

► APPLICATION DATA AND FINAL PERFORMANCES	UoM	Value
Application temperature	°C	From +5 to +30
Maximum relative air humidity for application	-	(85 ± 5)%UR
Surface drying time (20°C, 50% R.H.), EN ISO 9117-3UNI EN ISO 1517	min	40 ± 5
Walk-over time (at +5°C)	hours	8
Walk-over time (at +23°C)	hours	5
Walk-over time (at +30°C)	hours	3

► PRODUCT IDENTIFICATION DATA (CEM-O-LUX TOP COAT)	UoM	value
► APPLICATION DATA AND FINAL PERFORMANCES (CEM-O-LUX TOP COAT)		
Application temperature	°C	From +5 to +30
Maximum atmospheric humidity for application	-	(85 ± 5)%UR
Surface drying time (20°C, 50% R.H.), EN ISO 9117-3	min	50 ± 5
Walk-over time (at +5°C)	hours	24
Walk-over time (at +23°C)	hours	10
Walk-over time (at +30°C)	hours	6
Operating temperature	°C	From -20 to +65
Permeability to water vapour (μ), DIN 52615	-	15000 ± 2000
Surface gloss, gloss 60°, EN ISO 2813	-	(9 ± 1)°
Surface gloss, gloss 60°, with CEM WAX, EN ISO 2813	-	(30 ± 4)°
Wear resistance – Taber Method, CS17 grinding wheel, 1,000 revolutions, 1 kg load, EN ISO 5470-1	mg	118 ± 10
Resistance to UV and condensate cycles, cycle A (8 hours UVA-340 + 4 hours condensate 50°C), for a total of 168 hours, measurement of yellowing, ΔE, ASTM D 4329	-	0,4 ± 0,1

CEM-O-LUX

► APPLICATION DATA AND FINAL PERFORMANCES (CEM-O-LUX TOP COAT)	UoM	value
Resistance to UV and condensate cycles, cycle A (8 hours UVA-340 + 4 hours condensate 50°C), for a total of 168 hours, measurement of opacification, ΔGloss, ASTM D4329	-	< 1°
Tyre mark maximum resistance temperature	°C	+65
Static contact angle (measure of water-repellency), NORMAL 33/89	-	(110 ± 10)°
Buchholz hardness, UNI EN ISO 2815	-	54 ± 8

► TECHNICAL DATA IN CONFORMITY TO EN 13813 (CEM-O-LUX PRIMER + TOP COAT)	UoM	value
BCA wear resistance, depth of wear, EN 13892-4	µm	20 ± 5
Bond strength, EN 13892-8	MPa	2.7 ± 0.3 Substrate fracture
Impact resistance (class), measured on specimens of concrete coated with MC (0.40) as per EN 1766, EN ISO 6272-1	N•m	10 ± 1

Storage of the product

- 24 months in the closed original packaging, in a dry and covered place away from direct sunlight, at a temperature between +5°C and +35°C.

Packages

VARIANT	PACKAGE	ADR	PACKAGES PER PALLET	COMPONENTS
GRIGIO FINESTRA (RAL 7040) (1)	PRIMER + TOP COAT 20 kg	YES	-	PRIMER: 8 kg (metal drum) TOP COAT: 12 kg (metal drum)
GRIGIO FINESTRA (RAL 7040)	box with 4 x 2.5 kg kits	P*	35 scatole	PRIMER: 1 kg for each kit (metal can) TOP COAT: 1.5 kg for each kit (metal can)
Transparent (1)	PRIMER + TOP COAT 14.4 kg	YES	18 scatole	PRIMER: 7.2 kg (metal drum) TOP COAT: 7.2 kg (metal drum)
Transparent	box with 4 x 1.8 kg kits	P*	35 scatole	PRIMER: 0.9 kg for each kit (metal can) TOP COAT: 0.9 kg for each kit (metal can)
TIER 1 COLOUR (1)	PRIMER + TOP COAT 20 kg	YES	-	PRIMER: 8 kg (metal drum) TOP COAT: 12 kg (metal drum)
TIER 2 COLOUR (1)	PRIMER + TOP COAT 20 kg	YES	-	PRIMER: 8 kg (metal drum) TOP COAT: 12 kg (metal drum)
TIER 3 COLOUR (1)	PRIMER + TOP COAT 20 kg	YES	-	PRIMER: 8 kg (metal drum) TOP COAT: 12 kg (metal drum)
TIER 4 COLOUR (1)	PRIMER + TOP COAT 20 kg	YES	-	PRIMER: 8 kg (metal drum) TOP COAT: 12 kg (metal drum)

Legenda ADR:

P* = merce PERICOLOSA imballata in quantità limitata (confezionata come da Cap. 3.4 ADR)

SI' = merce PERICOLOSA

(1): Drums with locking tie.

LEGAL NOTES

Advice on how to use our products corresponds to the current state of our knowledge and does not involve the assumption of any guarantee and / or responsibility for the final result of the work. They do not refore exempt the customer from the responsibility of verifying the suitability of the products for the use and the prefixed purposes through preventive tests. The website www.nordresine.com contains the latest revision of this datasheet.

EDITION

Issue date: 12.12.2016

CEM-O-LUX

Revision: 19.03.2018