



Chem Coats (Pvt) Ltd.

ChemCoat 441

Polyurethane enamel

DESCRIPTION

ChemCoat 441 is a protective and decorative coating for steel, concrete and timber.

USES

Finish coating on various flooring systems. The clear material is suitable for bar counters and similar applications.

BENEFITS

- Non-toxic when dry.
- Salt spray resistance (passes 1000 hours).
- Weather resistance – does not chalk, white does not yellow.
- Excellent water resistance.
- Resists aliphatic solvents, xylol and alcohol.
- Does not taint water.
- Good distilled water resistance.

SURFACE PREPARATION

At the time of applying ChemCoat 441 the surface should be clean, mechanically sound and dry. ChemCoat 441 is normally applied over primed surfaces and therefore surface preparation is consistent with the primer being used. If timber is sealed with ChemCoat 441 it should be sanded smooth and all debris of sanding removed. Oily timbers such as teak should be washed down with pure acetone (not oily acetone) and allowed to dry before coating with ChemCoat 441.

SURFACE PREPARATION

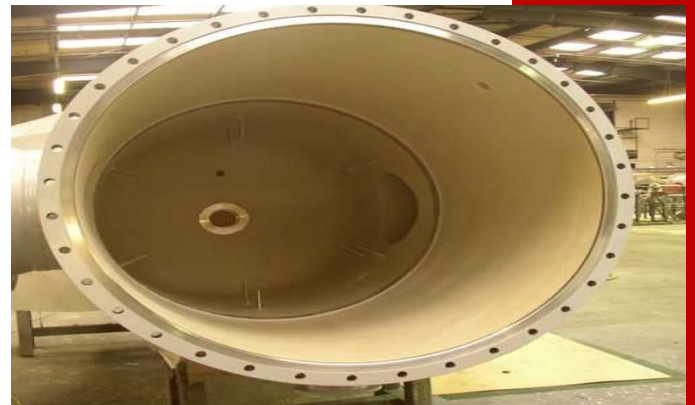
The substrate must be dry before application. Maximum moisture should be between 4-5%.

BONDING/PRIMING

Recommended primers under ChemCoat 441 are:

- Mild steel – ChemCoat 384
- Concrete and other porous surfaces – ChemCoat 386
- Timber (under pigmented ChemCoat 441- ChemCoat 386)
- Galvanized steel-ChemCoat 386

ChemCoat 386 is easy to rub down with emery or sand paper and to achieve the best finish. This should always be done and all resulting debris removed. If wet-sanding, the surface must be allowed to dry completely as any trace of moisture under ChemCoat 441 will promote bubbling in the film. Where ChemCoat 441 clear is used on timber no priming is required. Dilute the first coat with 15% ChemCoat Thinners No. 3.



PROPERTIES OF WET MATERIAL

Mixing ratio base : act	2 : 1 by volume
Density (typical)	1.40g/cm ³ white 1.20g/cm ³ colours 1.10g/cm ³ clear
Colour/s	Clear or as per Chem Coats colour chart
Finish	High gloss
Flash point	17° C
Fire resistance	Flammable
Dilution	ChemCoat Thinners no 3 Only
Consistency	Low-medium viscosity liquid

PROPERTIES OF DRY FILM

Maximum service temperature	Dry – +120° C Immersion – +70° C
Flexibility on conical mandrel	Passes
Hardness	2 000 gm (sheen scratch test)
Chemical Resistance	10 % hydrochloric acid, 10% phosphoric acid, 10 % sulphuric acid, 40% caustic soda domestic bleach

PROPERTIES DURING APPLICATION

Pot life	8 hrs / 5 l at 25° C (white) 3 hrs / 5 l @ 25° C (clear)
Volume solids	53% pigmented 38.5% clear
Recommended average dft per coat	35 - 40 µm pigmented 25 µm clear
Theoretical coverage for above dft	13.5 m ² pigmented 16.5 m ² / l clear on smooth surfaces
Wet film thickness at above coverage	75 µm pigmented 50 µm clear
Maximum recommended wft	100 µm pigmented 80 µm clear
Practical coverage	6 - 9 m ² / l pigmented 7 - 10 m ² / l clear (dependent on surface texture)



MIXING

Stir the contents of each container, particularly the base, very well. Add activator to base and stir together for at least five minutes using a flat paddle. Mechanical mixing gives better dispersion than manual mixing. If only part of a kit is to be used add one volume of activator to two volumes of base. Measuring must be accurate and separate stirrers and containers used for proportioning each component. Allow mixed material to stand for 20 minutes in shade prior to application. If thinning is needed use only Thinners no. 3 - incorrect choice of thinners may cause bubbling in the film. If the kit is split and kept for future use, the activator container must be very tightly sealed and stored upside down. The activator will react with moisture in the air. The split kit should not be stored for more than a few days or gelling will occur.

APPLICATION

ChemCoat 441 should be applied to the pre-primed surface within the over coating time stipulated for the relevant primer. Bubbling can result from using damp brushes or short-fiber rollers which are not completely dry before use, and also from applying too thick a film of material. Never apply thicker films than recommended. ChemCoat 441 should not be applied if the ambient temperature is below 8° C. The curing reaction will not proceed at low temperatures. If the surfaces are not at least 2° C above the dew point, a film of condensed moisture could be present. This again will cause bubbling as well as compromising adhesion.

CLEANING

ChemCoat Brush Cleaner before curing

PROTECTION ON COMPLETION

Protect surface against traffic and spillage until cured.

PACKAGING

ChemCoat 441 is supplied in 5 L containers.

HANDLING & STORAGE

All ChemCoat 441 related products have a shelf life of 12 months if kept in a dry, cool store in the original, unopened packs. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced.

HEALTH & SAFETY

Wet ChemCoat 441 is toxic and flammable. Ensure working area is well ventilated during application and drying. Avoid flames in vicinity. Avoid inhalation of dust and contact with skin and eyes. Suitable protective clothing, gloves, eye protection and respiratory protective equipment should be worn. The use of barrier creams provides additional skin protection. If contact with skin occurs, wash with water and soap. Splashes into eyes should be washed immediately with plenty of clean water and medical advice sought. Cured ChemCoat 441 is inert and harmless.

IMPORTANT NOTE

The information given in this data sheet is based on current development work and many years of field experience. Whilst every effort is made to ensure that the information is reliable, we cannot accept responsibility for any work carried out with our materials as we have no controls over methods of applications, site conditions etc. In view of the continuing research and development being undertaken in our laboratories we advise customers in their own interest to ensure that this data sheet has not been superseded by a more up-to-date publication. All products are sold subject to our standard conditions of sale which are available on request. Field services, where provided, does not constitute supervisory responsibility. For additional information, please contact your local Chem Coats representative.

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