Capalac Dickschichtlack

High solid, anti-corrosive metal protective enamel for priming, intermediate and finishing coats. For exterior and interior use. Certified corrosion protection for steel and galvanised steel according to DIN EN ISO 12944-6.

Product Description

Field of Application	1-pot-enamel for protective thick-film coatings and colourful designing of building components made of iron, steel, zinc, galvanised steel, aluminium, copper, unplastizised (rigid) PVC, wooden parts interiors and dimensionally stable exterior wood components. Corrosion protection for iron and steel. Unsuitable for coatings on roofing and anodised aluminium. Do not use white colour shades on heating systems in order to avoid yellowing (apply Capalac Heizkörperlack /radiator enamel).
Material Properties	■ Excellent adhesion. ■ High opacity (hiding/covering power) on component surfaces and edges. ■ Durable protection due to excellent weather resistance. ■ High solids content allows a better dry film thickness. ■ 1-Pot-Enamel System: Facilitates priming, intermediate and finishing coats with one product. ■ Test report for corrosiveness category C4, duration of conservation “long” on steel and galvanised steel according to DIN EN ISO 12944 part 6. ■ Available as enamel and mica types. ■ Tintable via ColorExpress in numerous colour shades. ■ Free of aromatic hydrocarbons.
Material Base / Vehicle	Epoxy ester with non-aromatic solvents.
Packaging/Package Size	■ **White, Mica and RAL 9006:** 750 ml, 2.5 litres, 10 litres and 35 kg ■ **ColorExpress:** 1 litre, 2.5 litres and 10 litres
Colours	■ **Standard:** Enamel: White Mica types: Mica and approx. RAL 9006 ■ **ColorExpress:** A multitude of enamel and mica tones can be tinted via the ColorExpress stations, e.g. RAL 9007.

When colour shades with a lower opacity (hiding/covering power) are used, e.g. red, orange or yellow, it is advisable to apply a first (priming) coat of product, tinted in a matching priming system colour, available via ColorExpress.
Note: If necessary, apply one transparent sealing coat of Capalac Kunstharz-Klarlack (clear coat) on intensively or dark tinted Capalac Dickschichtlack coatings to avoid a slight abrasion of pigments. Mica types are corrosion-inhibiting coatings. Their surface is matt and semi-rough according to RAL and German National Railways Standard (TL/TP-KOR).
Only suitable for interior use: An additional transparent sealing coat of Capalac Kunstharz-Klarlack leads to a more stressable interior surface and cleaning is facilitated.

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Colour Changes Occur With Mica Types:
In comparison to printed colour fan decks. Between Mica types of different manufacturers. In case of repairs. When different coating methods are used (e.g. paint brush, roller or spray application, powder coating and liquid coating).

Colour Resistance according to BFS Data Sheet No. 26:
Binder: Class B
Pigmentation: Group 1 to 3, depending on the colour.

Gloss Level

- **Enamel types:**
  Silk-matt/semi-gloss (mid sheen)
- **Mica shades:**
  Matt (flat)

Storage

Keep in a cool place, in tightly closed cans.

Technical Data

- Density: Approx. 1.3 g/cm³

Suitability according to Technical Information No. 606 Definition of Application Areas

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
+	+	+	+	+
(–) inapplicable / (○) of limited suitability / (+) suitable				

Application

Suitable Substrates

Dimensionally stable wood component parts, iron, steel, zinc, aluminium, unplastizised (rigid) PVC, and sound existing paint coatings.
The substrate must be clean, sound/stable, dry, and free all materials that may prevent good adhesion.
Maximum permissible moisture content in dimensionally stable wood: 13 %.
Do not use for coatings on roofing and anodised aluminium.

Substrate Preparation

Wooden Parts:
Sand the surface in fibre direction, clean thoroughly, remove exuding wood extractives, e.g. wood resin/rosin and resin galls, cut sharp edges (see BFS Data Sheet No. 18).

Iron, Steel:
Derust according to industry standard SA 2 ½ (blasting) as per DIN EN ISO 12944-4. At low stress conditions (e.g. indoors – without condensation water or aggressive influences) the surface may thoroughly be derusted to purity grade ST 3, either mechanically or manually.

Zinc, Galvanised Steel:
Wash with Multistar cleaner using sanding pad or with light ammonia solution or by sweep spraying according to BFS Data Sheet No. 5.

Unplastizised (Rigid) PVC:
Wash with Multistar cleaner using sanding pad or with light ammonia solution according to BFS Data Sheet No. 22.

Aluminium:
Wash with Multistar cleaner using sanding pad or with nitro-thinner or phosphoric acid solution using sanding pad according to BFS Data Sheet No. 6.

Copper:
Wash with Multistar cleaner using sanding pad.

Existing Enamel Coatings:
Roughen (sand) the surface slightly and/or treat with alkali. Remove unsound/unstable coatings.

Method of Application

Guidelines for Spray Application:

		Ø Nozzle	**Pressure**	**Advice**
Airless	Enamel	0.009 – 0.013 inch	180 – 200 bar	Membrane pump and piston pump
	Mica	0.015 – 0.019 inch	180 – 200 bar	Only to be used with piston pump

Surface Coating System

Substrate	Use	Substrate Preparation	Impregnation	Priming Coat	Intermediate Coat	Finishing Coat
Wood, derived timber products	interior	roughening	–	Capalac Dickschichtlack	if required Capalac Dickschichtlack	Capalac Dickschichtlack
Dimensionally stable wood	exterior	BFS Nr. 18	Capalac Holz-Imprägniergrund			
Iron, steel	interior/ exterior	derust/degrease	–			
Zinc (galvanised substrates)	interior/ exterior	BFS Nr. 5	–			
Aluminium	interior/ exterior	BFS Nr. 6	–			
Copper	interior/ exterior	Multistar/sanding pad	-			
Unplasticised/rigid PVC	interior/ exterior	BFS Nr. 22	–			
Sound existing coats of paint[1)]	interior/ exterior	roughening/alkali treatment	Prepare and prime defects according to the substrate			
Advice: Adhesion must be tested in advance for powder coatings, coil coatings and other critical substrates by a trial coating.						

Application:
Capalac Dickschichtlack can be applied by brush, roller or spraying equipment. Stir well before use and thin with white spirit, if necessary. Mica paints should be applied with spraying equipment in order to achieve an even surface. A blushing effect may occur on large areas, e.g. when application is divided into multiple work steps.

Corrosion Protection on Steel with Capalac Dickschichtlack:
Coating systems for corrosiveness categories C2, C3, C4 according to DIN EN ISO 12944-5
Surface preparation: Blasting to purity grade SA 2½ (DIN EN ISO 12944-4)

No.	Priming Coat	µm[1)]	Intermediate Coat	µm[1)]	Finishing Coat	µm[1)]	Total Reference Coating Thickness µm[1)]	Corrosiveness Category								
								C2[2)]			C3[2)]			C4[2)]		
								L	M	H	L	M	H	L	M	H
1	Capalac-Dickschichtlack e.g. RAL 7036	60			Capalac-Dickschichtlack e.g. RAL 7036	60	120									
2	Capalac-Dickschichtlack Mica	80			Capalac-Dickschichtlack Mica	80	160									
3	Capalac-Dickschichtlack e.g. RAL 7036	60	Capalac-Dickschichtlack e.g. RAL 7036	60	Capalac-Dickschichtlack e.g. RAL 7036	60	180									
4[3)]	Capalac-Dickschichtlack Mica	80	Capalac-Dickschichtlack e.g. RAL 7036	60	Capalac-Dickschichtlack e.g. RAL 7036	60	200									
5[3)]	Capalac-Dickschichtlack Mica	80	Capalac-Dickschichtlack Mica	80	Capalac-Dickschichtlack Mica	80	240									

1)	Reference layer thickness
2)	Explanations for corrosiveness categories see below.
3)	With verification of suitability (Test Report) according to DIN EN ISO 12944 part 6 for system No. 5.
Blue=	Suitable
White =	Unsuitable

Corrosion Protection on Galvanised Steel with Capalac Dickschichtlack (Duplex System):
Coating system for corrosiveness category C2, C3, C4 according to DIN EN ISO 12944-5
Surface preparation: “Sweepen” · slightly grit/shot- blasting (DIN EN ISO 12944-4)

No.	Priming Coat	µm[1)]	Intermediate Coat	µm	Finishing Coat	µm	Total Reference Coating Thickness µm	Corrosiveness Category								
								C2			C3			C4		
								L	M	H	L	M	H	L	M	H
1*	Capalac-Dickschichtlack e.g. RAL 5010	60			Capalac-Dickschichtlack e.g. RAL 5010	60	120									
2*	Capalac-Dickschichtlack Mica	80			Capalac-Dickschichtlack Mica	80	160									

* With verification of suitability (Test Report) according to DIN EN ISO 12944 part 6.

Explanations:
Corrosiveness categories (see DIN EN ISO 12944 part 2)

Category/ Loads	Examples for typical environmental conditions or loads in moderate climate.	
	exterior	interior
C2 Low	Atmospheres with low pollution. In the majority of cases rural areas.	Unheated buildings where condensation may occur, e.g. storehouses, sports halls.
C3 Middle (Moderate)	Atmosphere in cities and industrial areas, moderate pollution caused by sulphur dioxide. Coastal areas with low salt loads.	Production rooms with a high humidity and some air pollution, e.g. facilities for the production of foods, laundries, breweries, creameries.
C4 High	Industrial areas and coastal areas with moderate salt loads.	Chemical facilities, swimming pools, boathouses above sea water.

Duration of Protective Effect:
(See DIN EN ISO 12944 part 1 and part 5)
Duration of protective effect: This means the lifetime of a coating system up to the first repair. The time spans, mentioned below, are based on experience. They enable the customer to specify a repair program under economic factors. Duration of protective effect in years (no warranty time !)

Time Period	Duration of protective effect (years)
Low **(L)**	2–5
Middle (**M**)	5–15
High (**H**)	over 15

Consumption

Consumption / Coating Thickness:					
Used Tools	**Material Type**	**Consumption/m²**	**Average Consumption/m²**	**Average Wet Film Thickness**	**Average Dry Film Thickness**
Brush / Roller	Enamel type (unicoloured)	100–125 ml	approx. 115 ml	approx. 115 µm	approx. 65 µm
	Mica and DB colours	125–160 ml	approx. 140 ml	approx. 140 µm	approx. 80 µm
	RAL 9006	100–125 ml	approx. 115 ml	approx. 115 µm	approx. 60 µm
Spraying Equipment	Enamel type (unicoloured)	100–125 ml	approx. 115 ml	approx. 115 µm	approx. 65 µm
	Mica and DB colours	150–180 ml	approx. 160 ml	approx. 160 µm	approx. 80 µm
	RAL 9006	125–150 ml	approx. 135 ml	approx. 135 µm	approx. 70 µm

These reference values for consumption and layer thickness may vary depending on the nature and condition of the substrate. The exact consumption is best established by a trial coating (test area) on site.

Application Conditions

Lower Temperature Limit for Application and Drying:
+5 °C for product, substrate and ambient air.

Drying/Drying Time

at 20 °C and 65% relative humidity	**dust dry**	**touch dry**	**recoatable**	**completely dry**
after hours	4	8	24	approx. 5 days

Lower temperatures and higher humidity extend the drying time. Adding 5% by volume of Capalac PU-Härter (hardener) leads to accelerated drying and stressability of the coating.

Tool Cleaning

Immediately after use with white spirit.

Advice

Special Risks (Hazard Note) / Safety Advice (Status as at Date of Publication)

Capalac Dickschichtlack base white and transparent:
Flammable liquid and vapour. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking. Keep out of reach of children. Keep away from open flames/hot surfaces. - No smoking. Do not breathe vapours/ spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid release to the environment. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate, Cobalto-neodecanato, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

Capalac Dickschichtlack base EG:

Flammable liquid and vapour. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapours/ spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not get in eyes, on skin, or on clothing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.

Disposal

Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Particular attention should be made to removing wastage from site in compliance with standard construction site procedures.
In Germany: Only completely emptied clean cans/containers should be given for recycling. Dispose containers with residues of liquid product via waste collection point accepting old paints and enamels. Dispose dried/hardened product residues as construction site/demolition/municipal or domestic waste.

EU limit value for the VOC content

of this product (category A/i): 500 g/l (2010). This product contains max. 500 g/l VOC.

Product Code Paints and Enamels

M-LL01

Substances of Content - Declaration

Epoxy resin ester, titanium dioxide, coloured pigments, metal effect pigments, mineral fillers, aliphatics, glycol ether, additives.

Further Details

See Safety Data Sheet (MSDS).

Customer Service Centre

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