

# CapaCoustic Fine

Jointless system for ceilings with patented fine render finish



## Product Description

Description

### System Description

The CapaCoustic Fine system mainly consists of noise (reverberation effect) reducing carrier boards, pre-coated with an open-porous render.

By means of an adequate application technique of render/plaster coating, jointless and sound-absorbing surfaces can be created.

The properties of acoustic renders/plasters allow, amongst others, the preparation of very finely textured surfaces and the open-porous interior structure remains invisible. The CapaCoustic Fine system is primarily used in the area of ceilings.

The application on interior walls normally begins at a height above surfaces subjected to high mechanical loads, usually 2 metres or more.

CapaCoustic Fine is applicable onto all sound/stable substrates. A final coating is not necessary to achieve the acoustic reference value.

The system can be effected with only one coat of CapaCoustic Fine 0.7, when appearance requirements are reduced.

The corresponding finishing coat is deliverable in numerous colour shades, ex factory. Feasibility of specific colours must be clarified before placement of the order.

### Product Description / System Components

■ **CapaCoustic Pastöskeleber** (Paste-like adhesive):

Emulsion-based, elastic adhesive with mineral fillers, suitable for bonding CapaCoustic Fine-Putzträgerplatte 036/04+06 (Acoustics render carrier boards).

Product no.: 037/11 Packaging: 20 kg bucket

■ **CapaCoustic Mineralkleber** (Mineral adhesive)

Mineral dry mortar premix for bonding carrier boards CapaCoustic Fine-Putzträgerplatte 036/64+66.

Product no.: 037/12 Packaging: 25 kg bucket

■ **CapaCoustic Fine-Putzträgerplatte B1** (Acoustics render carrier boards)

Light-weight type and highly porous mineral fiber board, improved by a hydrophobic precoat.

Format: 74 x 57 cm = 0.4218 m<sup>2</sup>/panel

Product No.	Thickness	m <sup>2</sup> /Pallet
036/04	40 mm	28.7
036/06	60 mm	19.4



- **CapaCoustic Fine-Putzträgerplatte A2** (Acoustics render carrier boards):  
Light-weight type and highly porous mineral fiber board, improved by a hydrophobic precoat.  
German fire protection classification/building material class: A2 (noncombustible)  
Format: 74 x 57 cm = 0.4218 m<sup>2</sup>/panel.

Product No.	Thickness	m <sup>2</sup> /Pallet
036/64	40 mm	28.7
036/66	60 mm	19.4

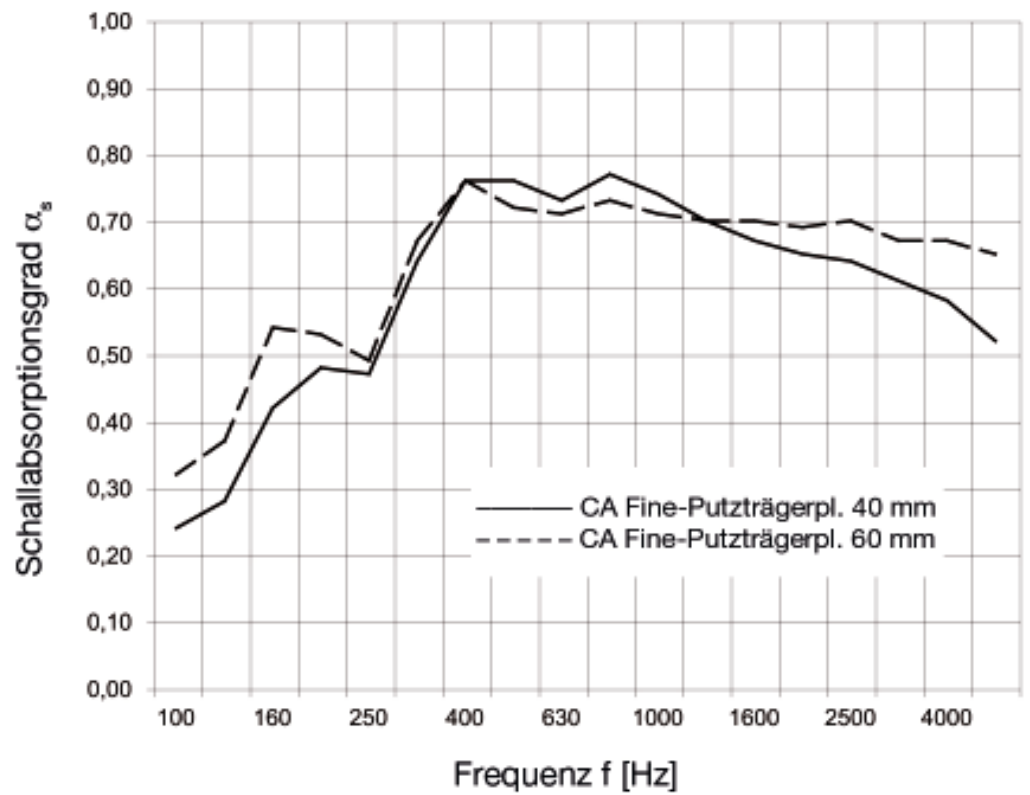
- **CapaCoustic Fine-Fugenspachtel** (Joint filler):  
Suitable for filling the area of butt joints; can easily be sanded.  
Product no.: 036/13 Packaging: 10 kg bucket
- **CapaCoustic Fine-Putz 0.7** (Render/plaster):  
Ready-to-use, emulsion based acoustics render/plaster, suitable as primary layer,  
grain size: 0.7 mm.  
Colour: White. Product no.: 036/70 Packaging: 20 kg bucket
- **CapaCoustic Fine Abschlußprofil** (End profile)  
End profile for use in the area of movement and expansion joints, suitable as wall termination with shadow gap and for applying the render finish flush with borders/edges.  
Length: 3.0 m; Packaging: 18 m bundle

Product No.	Thickness
036/54	40 mm
036/56	60 mm

**Figure 1:**  
**System Structure of CapaCoustic Fine**



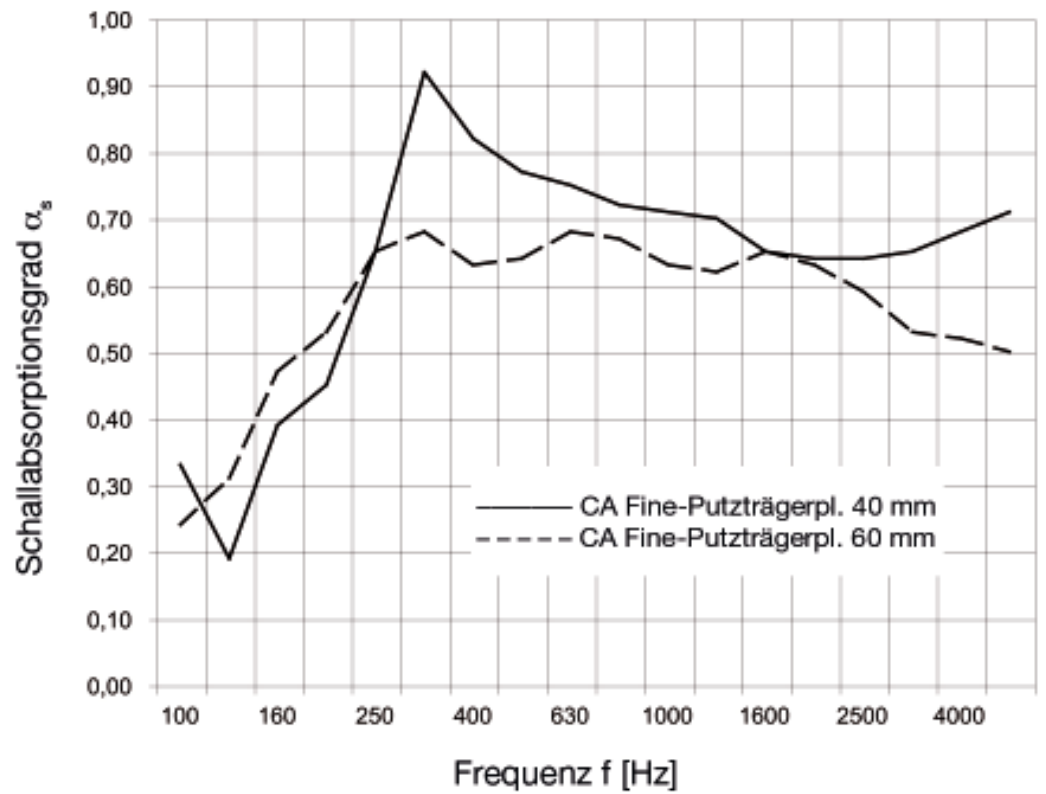
**Figure 2:**  
Acoustical Absorption  
*CapaCoustic Fine suspended*



Frequency	CA Fine 40 mm $\alpha_w = 0.70$		CA Fine 60 mm $\alpha_w = 0.65$	
	$\alpha_s$ third	$\alpha_p$ octave	$\alpha_s$ third	$\alpha_p$ octave
100	0.24	0.30	0.32	0.40
125	0.28		0.37	
160	0.42		0.54	
200	0.48	0.55	0.53	0.55
250	0.47		0.49	
315	0.64		0.67	
400	0.76	0.75	0.76	0.75
500	0.76		0.72	
630	0.73		0.71	
800	0.77	0.75	0.73	0.70
1000	0.74		0.71	
1250	0.70		0.70	
1600	0.67	0.65	0.70	0.70
2000	0.65		0.69	
2500	0.64		0.70	
3150	0.61	0.55	0.67	0.65
4000	0.58		0.67	
5000	0.52		0.65	

Figure 3: Acoustical Absorption

CapaCoustic Fine directly bonded



Frequency	CA Fine 40 mm $\alpha_w = 0.70$		CA Fine 60 mm $\alpha_w = 0.65$	
	$\alpha_s$ third	$\alpha_p$ octave	$\alpha_s$ third	$\alpha_p$ octave
100	0.33	0.30	0.24	0.35
125	0.19		0.31	
160	0.39		0.47	
200	0.45	0.65	0.53	0.60
250	0.65		0.65	
315	0.92		0.68	
400	0.82	0.80	0.63	0.65
500	0.77		0.64	
630	0.75		0.68	
800	0.72	0.70	0.67	0.65
1000	0.71		0.63	
1250	0.70		0.62	
1600	0.65	0.65	0.65	0.65
2000	0.64		0.63	
2500	0.64		0.59	
3150	0.65	0.70	0.53	0.60
4000	0.68		0.52	
5000	0.71		0.50	

Field of Application

For rooms with a high reverberation effect very often reverberation diminishing measures are needed and systems with sound-absorbing properties are applied to reduce reverberation time. Therefore, particularly open-porous and head-porous products are used, in order to reduce noise pollution (incident/sound/acoustic energy).

The sound energy reducing effect is achieved by the friction of oscillating air molecules with the pore sides in the open-porous structure.

## Application

### 3. Bonding of CapaCoustic Fine

*Fine-Putzträgerplatte (Render/plaster carrier board)*

Please note: Bonding of carrier boards must be effected with special diligence to achieve a proper render/plaster finish.

#### 3.1. Preparation of CapaCoustic Pastöskeleber (Paste-like adhesive)

Bonding of carrier boards CapaCoustic Fine-Putzträgerplatte 036/04–06 is effected with CapaCoustic Pastöskeleber 037/11.

Stir the adhesive with a suitable stirrer/agitator until a lump-free mass is achieved.

The open time can be shortened by adding 10 - 20 % by weight of cement and 200 ml cold tap (potable) water per 20 kg bucket; stir until the mixture is free of any lumps. Please note: The storage stability of adhesive can no longer be ensured afterwards.

– **Non-Combustible A2** (German fire behaviour classification)

Bonding of carrier boards CapaCoustic Fine Putzträgerplatte 036/64–66 is effected with mineral adhesive CapaCoustic Mineralkleber 037/12. The adhesive can be mixed with all current flow mixers, but also by hand with a high-output stirrer/agitator at low speed adding cold tap (potable) water, until the product is free of any lumps.

Allow to stand and swell for approx. 10 minutes, then stir up again. Adjust to working consistency with a small amount of tap water, if necessary.

Water demand: Approx. 5 to 6 litres per 25 kg bag. The adhesive is applicable within approx. 2 to 2 ½ hours (pot life), depending on weather conditions. Adhesive that has already stiffened cannot be made usable again.

#### 3.2 Adhesive Application

3.2.1 Bonding of acoustics render carrier boards to the substrate is always effected with the uncoated side of the board. Apply the adhesive intensively with pressure to the full surface of the board, then treat the surface with a 10 x 10 mm notched trowel.

3.2.2. Consumption: Approx. 3.4 kg/m<sup>2</sup>

#### 3.3 Bonding

Apply render carrier boards to the substrate with an offset of butt joints. The use of a suitable tool is advisable, e.g. large-scale PU disc/trowel.

The precoated side of carrier boards must be absolutely free of any adhesive residues. Ensure a flush and jointless positioning of the boards. The use of a suitable rule is advisable to guarantee an even surface.

#### 3.4 Joints in the Substrate

Joints in the substrate (except expansion joints) must be covered by bonding carrier boards CapaCoustic Fine-Putzträgerplatte with an overlap of min. 10 cm. Movement joints in the substrate must also be formed as expansion joint, when laying CapaCoustic Fine boards.

#### 3.5 Filling of Board Joints

3.5.1 Preparation:

– **Standard B1** (German fire behaviour classification)

Adjust joint filler CapaCoustic Fine 036/13 to application consistency by mixing with approx. 1000 ml of tap (potable) water per 10 kg bucket.

– **Noncombustible A2** (German fire behaviour classification)

Stir up fine render CapaCoustic Fine 0.7 thoroughly for joint filling, using a suitable and clean stirrer/agitator.

3.5.2 Filling Butt Joints:

Apply the filler into butt joints and allow a bead of material to remain on the surface; do not wipe off flush with the surface.

3.5.3 Drying Time:

After having completed the filler application, allow the pre-coating to dry thoroughly. Ensure a drying time of approx. 48 hours at 22 °C room temperature and 60 % of relative humidity. Provide for corresponding room temperature and proper ventilation.

3.5.4 Consumption: Approx. 0.30 kg/m<sup>2</sup>

**3.6 Sanding of Board Surfaces**

Sand the board joints planar/even under low pressure using Capatect-Styropor-Schleifbrett (Foam emery board, 230 x 110 mm sized, round grain 16-grit sandpaper). Mechanical surface sanding is not advisable.

Sanding of the full surface is possible with Capatect-Styropor-Schleifbrett (Foam emery board) 500 x 250 mm sized, if necessary. Note: In this case the factory-made coating should be sanded down for max. 20 %. The planarity tolerances of DIN 18 202 table 3, line 7 are to be verified with the corresponding rule. Deviations must be adjusted by sanding.

Distance of checkpoints (metres)	Depth gauges as limit values (mm)
0.1	2
1	3
4	8
10	15
15	20

**4. Coating with Acoustics Render/Plaster**

Note: Always use clean stainless steel tools for each operation/working step.

**4.1 Application of First Coat**

**4.1.1 Preparation of Render/Plaster:**

Stir up CapaCoustic Fine-Putz 0.7 (for approx. 3 minutes) very thoroughly with a suitable and clean stirrer/agitator.

**4.1.2 Render/Plaster Application of the First Coat:**

Apply CapaCoustic Fine 0.7 with the smooth side of a one-sidedly notched trowel and then treat with the 6 x 6 mm notched side in order to achieve a coating surface with a notched texture. Carefully smoothen the surface within the workability-time (open time: approx. 30 minutes) of applied product, using a stainless steel wiper (inclination angle: approx. 5°). Treat the surface crosswise to the corrugations/grooves under low pressure. Each layer should overlap the previous by half the width of a smoothing/finishing trowel. Always start the smoothening procedure from walls or edges in order to minimize traces of working tools. Small trowel traces < 1 mm should not be eliminated at that time. It is advantageous to proceed with 3 working teams. One team for product application using the smooth trowel side, a second team for surface treatment with special Capatect acoustics system trowel (notched side), and the third team for surface smoothening.

Repeat the smoothening procedure after a waiting time of approx. 5 to 10 minutes. Hereby (when drawing slowly and under low pressure) the water is pulled onto the surface. Carefully smoothen all noticeable working traces, avoiding the forming of further traces. A subsequent surface treatment by sanding is not possible.

**4.1.3. Drying Time:**

After having completed the first coat, allow the render/plaster to dry thoroughly for approx. 48 hours at a room temperature of 22 °C and 60 % of RH. Ensure the corresponding room temperature and proper ventilation during the complete drying time.

4.1.4 Consumption: 4.0 - 4.5 kg/m<sup>2</sup>

**4.2 Application of Finishing Coat**

**4.2.1 Preparation of Render/Plaster:**

See 4.1.1

**4.2.2 Render/Plaster Application of the Finishing Coat:**

Same procedure as described under point 4.1.2

**4.2.3 Drying Time:**

Allow the finishing render coating to dry thoroughly. The system needs several days to become fully dry (at a room temperature of 22° C and 60 % of RH). The acoustical effect can only be verified when the system is fully dry.

4.2.4 Consumption: Approx. 3.0 - 3.5 kg/m<sup>2</sup>

Substrates

Substrate tolerances must comply with the requirements of German standard DIN 18202, table 3, line 6 for prepared, but unfinished walls and undersides of ceilings (soffits). The below mentioned depth gauges must be checked by adequate rules. Irregularities cannot be equalised with the system structure and must be pretreated with suitable fillers/surfacers.

Distance of checkpoints (metres)	Depth gauges as limit values (mm)
0.1	3
1	5
4	10
10	20
15	25

**1.1 Solid Walls and Ceilings**

Suitable substrates: Coated or uncoated surfaces of solid walls or ceilings.  
To guarantee stableness, the existing substrate must be correspondingly sound/firm.

**1.2 Suspended Ceilings** (see figure 2)

1.2.1 The maximum permissible additional bearing load of ceiling construction must be min. 18 kg/m<sup>2</sup>. To guarantee stableness, the substrate for ceiling panelling must be correspondingly sound/firm.

1.2.2 The board joints of ceiling construction must be filler treated.

1.2.3 Follow the corresponding Technical Data Sheets for mounting ceiling constructions and processing instructions released by each system supplier.

Substrate Preparation

**2 Substrate Preparation**

Ensure a suitable substrate preparation to guarantee sufficient adhesion of the CapaCoustic Fine system to the substrate.

**2.1 Pre-Fabricated Concrete Formwork with an Even Surface**

Apply one priming coat of Caparol Optigrund E.L.F.

**2.2 Concrete with Normal Formwork**

The surface must be clean and free of release lubes/form oils and all other separating substances. Push off cement laitance/burrs with suitable tools. Level high surface irregularities, caused by formwork faults, using filler & surfacer Capatect-Klebe- und Spachtelmasse 190. A further substrate preparation is not necessary.

**2.3 Gypsum Plasterboards/Drywalls/Sandwich-Type Plaster Boards**

Apply one priming coat of Caparol-Putzgrund 610.

**2.4 Lime-Gypsum Render/Plaster**

Apply one priming coat of Caparol-Putzgrund 610.

**2.5 Others**

For all other substrates not mentioned above the consultation with Caparol technical support is essential.

Proper adhesion of carrier boards CapaCoustic Fine-Putzträgerplatte on existing substrates must be checked, if necessary.

Minimum adhesive tensile (pull-off) strength of CapaCoustic carrier boards to the substrate: 0.0075 N/mm<sup>2</sup>.

## Advice

### Suitable Tools for Application:

Please use only the recommended tools, as mentioned below.

- **Rules** in the length as described under point 1. to check the coating system for irregularities (to ensure evenness/planarity)
- **Power agitator** with stirrer for adhesive and a separate clean stirrer, only to be used for acoustics render/plaster
- **Large-scale PU disc/trowel** to press on the acoustics render carrier boards
- **Measuring cup** with a minimum content of 1 litre to adjust the acoustics render exactly to the specified working consistency
- **Smoothing trowel** made of stainless steel for applying acoustics render
- **Notched CapaCoustic scraper** with 6 x 6 mm notching
- **Wiper**, stainless steel (60 mm), with knob, rounded edges to smoothen the render/plaster coating
- **Smoothing trowel** "Venetian shape" with rounded edges
- **Notched trowel** with 10 x 10 notching, for applying the adhesive
- **Small-sized Capatect-Styropor-Schleifbrett**  
(Foam Emery/Sanding Board: 230 x 110 mm sized, round grain 16-grit sandpaper)
- **Large-sized grinding tool Capatect-Styropor-Schleifbrett**  
(Foam Emery/Sanding Board: 500 x 250 mm sized, round grain 16-grit sandpaper)
- **High-power air dehumidifier** for a fast drying, if necessary due to adverse construction site conditions

All tools must be rust-free (stainless) and always clean, because even the smallest impurity, e.g. small-sized lumps of render falling down from the agitator, induce visible score marks in the surface and pollutes the render/plaster coating. Hence the acoustics render trowel must be free of adherent impurities.

### Scaffolding for Building Site:

The complete area below planned acoustics ceilings must always be provided with suitable scaffolding to allow unhindered render/plaster application without lapping.

### Employment of Staff:

A working team should consist of four craftsmen: One craftsman for product preparation, two craftsmen for applying the render/plaster onto the ceiling and one craftsman for notched trowel treatment, smoothening or render/plaster surface treatment. Less manpower may lead to discontinuous operations. Correspondingly more personnel is necessary for jointless application on large areas. Ensure continuously full-surface treatment without any breaks.

### Tolerances of each Procedure:

Due to individual application techniques of staff members, the thickness of each system coating may vary as follows:

- **CapaCoustic Fine-Kleber** (Adhesive):  
2 to 5 mm
- **CapaCoustic Fine-Putzträgerplatte** (Render/plaster carrier board):  
For 40 mm board: 40 to 42 mm; for 60 mm board: 60 to 62 mm
- **CapaCoustic Fine-Putz 16** (Render/plaster):  
First coat: 1.5 to 2.5 mm
- **CapaCoustic Fine-Putz 17** (Render/plaster):  
Finishing coat: 1.0 to 2.0 mm

The exact system thickness for mounting parts, such as revision manholes, end profiles and lamps, cannot be specified.

A trial application of an approx. 2 m<sup>2</sup> sample by the craftsman is advisable to establish the exact individual system configuration height.

Customer Service Centre

**Application Quality:**

The quality of finished surfaces highly depends on the accuracy of application and observance of the manufacturer's recommendations (application instructions). Nevertheless, minor traces of trowel application and slight unevenness cannot be avoided, due to manual application technique. Imperfections may be visible/noticeable in the case of adverse lighting conditions, e.g. grazing light/sidelight. If a ceiling is subjected to extreme grazing light, we can specify references to get an onsite impression of the achievable quality.

**Approval Criteria:**

For the inspection of surface evenness, the surface tolerance value of German standard DIN 18202, tabel 3, line 7 has to be applied/adopted.

**Progress Planning:**

The system is purely aqueous based and the drying process is not accelerated by hydraulic binding additives. Therefore it is essential to provide for optimum drying conditions. Heat to a room temperature of approx. 22 °C and provide for sufficient escape of saturated air (ventilation). The repair of smooth/even surfaces is generally difficult. The finishing coat should be effected when all other construction works have been finished, in order to minimise the risk of partial damages.

Important: Always use gloves when mounting fixtures on the finished ceiling to avoid fingermarks.

Tel.: (+49) 0 61 54 / 71 17 10

Fax: (+49) 0 61 54 / 71 17 11

e-mail: kundenservicecenter@caparol.de

International Distribution: Please see [www.caparol.com](http://www.caparol.com)