

Plaster & Façade Systems

# AWF11.de

**Technical Brochure** 

2023-12

# **Knauf WARM WALL Render Systems**

## Note on English translation / Hinweise zur englischen Fassung

This is a translation of the Technical Broschure valid in Germany.

All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.

Knauf Gips KG denies any liability for applications outside of Germany as this requires changes acc. to the respective national standards and building regulations.

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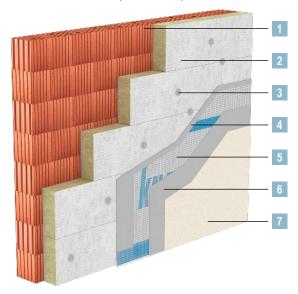
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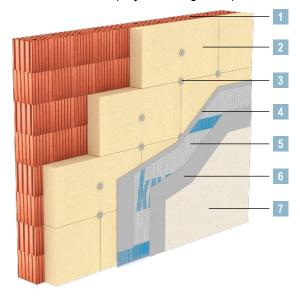
#### **Knauf WARM WALL Systems with Plaster Coating**

#### **In Solid Construction**

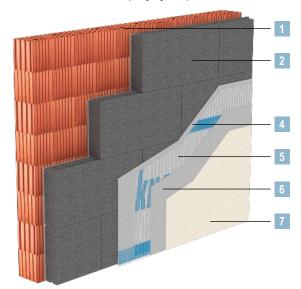
#### WARM WALL Plus MW (Mineral wool)



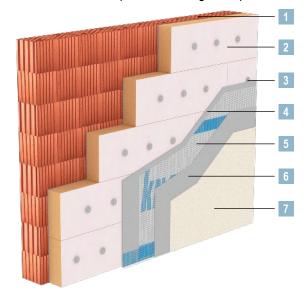
WARM WALL Slim PU (Polyurethane rigid foam)



#### WARM WALL Basis EPS (Polystyrene)



WARM WALL Slim PF (Phenolic resin rigid foam)



#### Legend:

- 1 Substrate
- 2 Insulation (glued / glued and dowelled)
- 3 System dowel if required
- 4 Basecoat
- 5 Reinforcement mesh
- 6 Basecoat, primer
- 7 Finish coat, paint coat if necessary

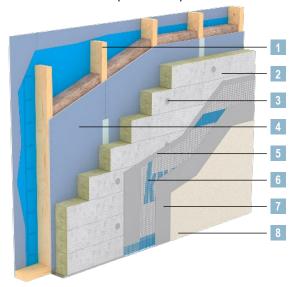
### **System range**



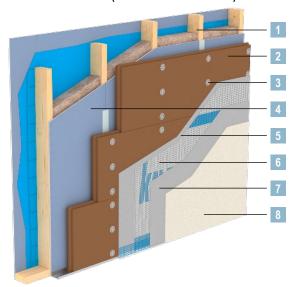
### **Knauf WARM WALL Systems with Plaster Coating (Continuation)**

#### **In Timber Construction**

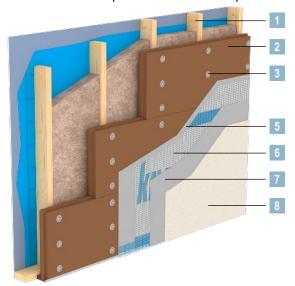
#### WARM WALL Plus MW (Mineral wool)



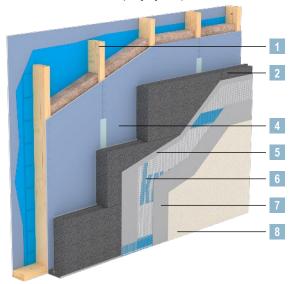
WARM WALL Natur D (Wood soft fibre PAVATEX)



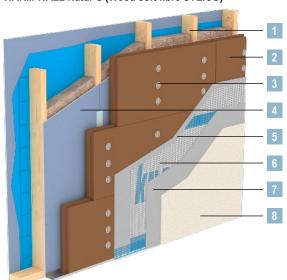
WARM WAND Natur T (Wood soft fibre AGEPAN®)



WARM WALL Basis EPS (Polystyrene)



WARM WALL Natur S (Wood soft fibre STEICO)



#### Legend:

- 1 Substrate
- 2 Insulation (glued / glued and dowelled / dowelled / stapled)
- 3 System dowel / staple
- 4 Board substrate if required
- 5 Basecoat
- 6 Reinforcement mesh
- 7 Basecoat, primer
- 8 Finish coat, paint coat if necessary



### Overview of the Certificates of Usability

Knauf WARM WALL system	Certificate of usability	Insulation material	System installation
In Solid Construction			
WARM WALL Basis EPS WE111.de	Z-33.41-81 WARM WALL Basis EPS in Solid Construction	Expanded polystyrene (EPS)	Adhesive bonding
	Z-33.43-82 WARM WALL Basis EPS in Solid Construction	Expanded polystyrene (EPS)	Glued and dowelled
WARM WALL Plus MW WE112.de	Z-33.44-83 WARM WALL Plus MW in Solid Construction	Mineral wool lamella (MW)	Glued
	Z-33.43-82 WARM WALL Plus MW in Solid Construction	Mineral wool lamella (MW) Mineral wool panel (MW)	Glued and dowelled
WARM WALL Slim PF P327.de	Z-33.43-1235 WARM WALL Slim PF in Solid Construction	Phenolic resin rigid foam (PF)	Glued and dowelled
WARM WALL Slim PU P328.de	Z-33.41-1382 WARM WALL Slim PU in Solid Construction	Polyurethane rigid foam (PU)	Glued
	Z-33.43-1408 WARM WALL Slim PU in Solid Construction	Polyurethane rigid foam (PU)	Glued and dowelled
In Timber Construction			
WARM WALL Basis EPS WE201.de	Z-33.47-899 WARM WALL Basis EPS in Timber Construction	Expanded polystyrene (EPS)	Glued
WARM WALL Plus MW WE202.de	Z-33.47-899 WARM WALL Plus MW in Timber Construction	Mineral wool lamella (MW) Mineral wool panel (MW)	Glued Glued and dowelled
WARM WALL Natur D WE203D.de	Z-33.47-638 WARM WALL Natur D in Timber Construction	Wood fibre insulation (WF) from PAVATEX	Dowelled or stapled
WARM WALL Natur S WE203S.de	Z-33.47-1258 WARM WALL Natur S in Timber Construction	Wood fibre insulation (WF) from STEICO	Dowelled or stapled
WARM WALL Natur T WE203T.de	Z-33.47-673 WARM WALL Natur T in Timber Construction	Wood fibre insulation (WF) from AGEPAN®	Dowelled or stapled

## System overview

## **System components**



### **WARM WALL Systems in Solid Construction**

**System design – Façade** (acc. to German national technical approval aBG)

Knauf WARM WALL system	Basis EPS WE111.de	Plus MW WE112.de	Slim PF P327.de	Slim PU P328.de
Certificate of Usability	Z-33.41-81, Z-33.43-82	Z-33.44-83, Z-33.43-82	Z-33.43-1235	Z-33.41-1382, Z-33.43-1408
Insulation				
Insulation material	EPS	MW	PF	PU
(Adhesive and) basecoat				
SM300	•	•		•
SM700 Pro	•	•	•	•
Sockel-SM	•	•		
Lustro	•	•		
Pastol	•			
Reinforcement mesh				
Reinforcement mesh 4x4 mm	•	•		
Reinforcement mesh 5x5 mm	•	•	•	•
Reinforcing mesh Pastol	•			
Primer (not in the scope of the a	ipproval)			
Isogrund	•	•	•	•
Quarzgrund pro	•	•	•	•
Finish coat				
MineralAktiv Scheibenputz floated render	•	•		•
MineralAktiv Scheibenputz Dry floated render	•	•		•
SM 260 Pro	•	•		•
Noblo	•	•	•	•
Noblo Filz	•	•		•
RP 240	•	•		•
SM700 Pro	•	•		•
Mak3	•	•		
Conni S	•	•	•	•
Addi S	•	•		•



### WARM WALL Systems in Solid Construction (Continuation)

System design – Plinth (not in the scope of the German National Technical Approval aBG)

Knauf WARM WALL system	Basis EPS WE111.de	Plus MW WE112.de	Slim PF P327.de	Slim PU P328.de
Insulation				
Insulation material	EPS plinth insulation board	EPS plinth insulation board	EPS plinth insulation board / PU	EPS plinth insulation board / PU
(Adhesive and) basecoat				
SM300	•	•	•	•
SM700 Pro	•	•	•	•
Sockel-SM	•	•	•	•
Sockel-SM Pro	•	•	•	•
Reinforcement mesh				
Reinforcement mesh 4x4 mm	•	•		
Reinforcement mesh 5x5 mm	•	•	•	•
Primer				
Isogrund	•	•	•	•
Quarzgrund pro	•	•	•	•
Finish coat				
MineralAktiv Scheibenputz floated render	•	•	•	•
MineralAktiv Scheibenputz Dry floated render	•	•	•	•
SM 260 Pro	•	•	•	•
Noblo	•	•	•	•
Noblo Filz	•	•	•	•
RP 240	•	•	•	•
SM700 Pro	•	•	•	•
Conni S	•	•	•	•
Addi S	•	•	•	•
Sockel SM Pro (sponged)	•	•	•	•
Sockel SM (sponged)	•	•	•	•
Butz	•	•	•	•
Moisture / damp protection				
Sockel-Dicht1)	•	•	•	•

<sup>1)</sup> Not necessary with Sockel-SM Pro as a basecoat and render finish with a total thickness  $\geq$  7 mm.

### System overview

### **System components**



#### **WARM WALL Systems in Timber Construction**

System design – Façade (acc. to German national technical approval aBG)

-,			- /		
Knauf WARM WALL system	Basis EPS WE201.de	Plus MW WE202.de	Natur D WE203D.de	Natur S WE203S.de	Natur T WE203T.de
Certificate of Usability	Z-33.47-899	Z-33.47-899	Z-33.47-638	Z-33.47-1258	Z-33.47-673
Insulation					
Insulation material	EPS	MW	WF (PAVATEX)	WF (STEICO)	WF (AGEPAN®)
(Adhesive and) basecoat					
SM300	•	<b>●</b> 1)	•	<b>●</b> 2)	
SM700 Pro	•	•	•	•	•
Sockel-SM	•				
Luis	•	•	•	•	•
Pastol	•				
Pastol Dry	•				
Reinforcement mesh					
Reinforcement mesh 4x4 mm	•	•	•	•	•
Reinforcement mesh 5x5 mm	•	•	•	•	•
Reinforcing mesh Pastol	•				
Primer (not in the scope of the a	approval)				
Isogrund	•	•	•	•	•
Quarzgrund pro	•	•	•	•	•
Finish coat					
MineralAktiv Scheibenputz floated render	•	•	•	<b>•</b> 2)	•
MineralAktiv Scheibenputz Dry floated render	•			<b>•</b> 2)	
SP 260 Pro	•	•	•	•	•
Noblo	•	•	•	•	•
Noblo Filz	•	•	•	•	•
RP 240	•	•	•	•	•
SM700 Pro	•	•	•	•	•
Conni S	•	•	•	•	•
Addi S	•	•	•	•	•
Paint coat					
MineralAktiv Fassadenfarbe façade paint				<b>●</b> 3)	
Siliconharz-EG-Farbe paint		• <sup>4)</sup>	●5)		<b>●</b> 6)
•					

- 1) Only in conjunction with finish coats of MineralAktiv Scheibenputz floated render, SP 260 Pro, Noblo, RP 260 and Conni S.
- 2) Only permissible on WF protect H dry, WF protect M dry, WF protect L dry and WF duo dry.
- 3) Required on MineralAktiv Scheibenputz Dry floated render.
- 4) Required in case of Noblo and Conni S.
- 5) Required with application on board materials with the exception of MineralAktiv Scheibenputz floated render.
- 6) Required for all finish coats with the exception of Conni S and MineralAktiv Scheibenputz floated render.



### **WARM WALL Systems in Timber Construction (Continuation)**

System design – Plinth (not in the scope of the German National Technical Approval aBG)

•					
Knauf WARM WALL system	Basis EPS WE201.de	Plus MW WE202.de	Natur D WE203D.de	Natur S WE203S.de	Natur T WE203T.de
Insulation					
Insulation material	EPS plinth insulation board				
(Adhesive and) basecoat					
SM300	•	•	•	•	•
SM700 Pro	•	•	•	•	•
Luis			•	•	•
Sockel-SM	•	•	•	•	•
Sockel-SM Pro	•	•	•	•	•
Reinforcement mesh					
Reinforcement mesh 4x4 mm	•	•	•	•	•
Reinforcement mesh 5x5 mm	•	•	•	•	•
Primer					
Isogrund	•	•	•	•	•
Quarzgrund pro	•	•	•	•	•
Finish coat					
MineralAktiv Scheibenputz floated render	•	•	•	•	•
MineralAktiv Scheibenputz Dry floated render	•	•	•	•	•
SP 260 Pro	•	•	•	•	•
Noblo	•	•	•	•	•
Noblo Filz	•	•	•	•	•
RP 240	•	•	•	•	•
SM700 Pro	•	•	•	•	•
Conni S	•	•	•	•	•
Addi S	•	•	•	•	•
Sockel SM Pro (sponged)	•	•	•	•	•
Sockel SM (sponged)	•	•	•	•	•
Butz	•	•	•	•	•
Moisture / damp protection					
Sockel-Dicht <sup>1)</sup>	•	•	•	•	•

<sup>1)</sup> Not necessary with Sockel-SM Pro as a basecoat and render finish with a total thickness ≥ 7 mm.

## System overview

## Render systems



### **Render systems**

Render system	Mineral	Organic	Mineral / organic	Scratch render
Configuration	Insulation material  Mineral basecoat layer with reinforcement mesh  Finish coat (mineral)  Paint coat if required	Insulation material Pastol / Pastol Dry with Pastol reinforcement mesh Finish coat (organic) Paint coat if required	Insulation material  Mineral basecoat layer with reinforcement mesh Finish coat (organic) Paint coat if required	Insulation material  SM300 with reinforcement mesh Mak3
Properties	Natural mineral, thin-layer rendering mortar made of high-quality mineral-based raw materials optionally available with Jura or marble graining.  Robust, durable, open to diffusion with a variable design render surface.  Combined with a mineral reinforcement (basecoat) layer.	Synthetic resin bonded, diffusion capable plaster system with low absorption of water.  Optional use of silicon resin render or synthetic resin plaster for a larger range of colour shades.	Organically bonded finishing plaster for a more intensive range of colour shades.  Combined with a mineral reinforcement (basecoat) layer.	Thick-layer mineral scratch render system with an open surface structure.  Natural self-cleaning effect, highly robust system.  Combined with a mineral reinforcement (basecoat) layer.



#### **Product overview**

Product	Product description	Appli- cation	Packaging unit	Grain	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Col- our	Material number	Notes		
(Adhesive and) basecoat										
huy ENTED	SM700 Pro	25 kg	42 bags/pallet	1.0 mm	Layer thickness 5 – 10 mm: Application quantity 7.0 – 13.0 kg	White Pig- ment- ed	00164930 00167798	<ul> <li>Fibre reinforced, mineral bonding mortar, basecoat and renovation mortar and render finish for façades and the plinth</li> <li>Contains fibres and bonding agents</li> <li>Biocide-free</li> <li>See product data sheet SM700 Pro P241c.de</li> </ul>		
Hang Exposed	SM300	25 kg Bulk	42 bags/pallet Silo	1.0 mm	Layer thickness 3 – 7 mm: Application quantity 4.5 – 10.5 kg	Grey	00178249 00178250	<ul> <li>Mineral adhesive and basecoat for the façade and plinth area</li> <li>Adhesive agent</li> <li>Highly water-repellent</li> <li>High adhesive force</li> <li>Diffusion permeable</li> <li>See product data sheet SM300 P248.de</li> </ul>		
I have been been been been been been been be	Sockel-SM	25 kg	42 bags/pallet	1.0 mm	Layer thickness 5 – 7 mm: Application quantity 7.0 – 10.0 kg	Grey	00741451	<ul> <li>Mineral-based adhesive, basecoat and render finish for the plinth area</li> <li>Contains fibres and bonding agents</li> <li>Water-repellent</li> <li>Can be sponged</li> <li>High impact load</li> <li>See product data sheet Sockel-SM P213.de</li> </ul>		
hun Francisco	Sockel-SM Pro	25 kg	42 bags/pallet	1.0 mm	Layer thickness 5 – 7 mm: Application quantity 8.0 – 11.0 kg	Grey	00741450	<ul> <li>Adhesive, basecoat and render finish with moisture protection for the plinth area</li> <li>Can be used as a bonding plaster primer</li> <li>Non-conductive capillary action</li> <li>Contains sealant, fibres and bonding agents</li> <li>See product data sheet Sockel-SM Pro P213a.de</li> </ul>		

## Reinforcement layer I Reinforcement mesh

## **Product overview**



Product	Product description	Appli- cation	Packaging unit	Grain	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Col- our	Material number	Notes			
(Adhesive and) based	(Adhesive and) basecoat										
The state of the s	Lustro	20 kg Bulk	42 bags/pallet Silo	1.2 mm	Layer thickness 5 – 15 mm: Application quantity 4.3 – 13.0 kg/m <sup>2</sup>	White White	00063304	<ul> <li>Mineral high-yield and ultra-lightweight adhesive and basecoat</li> <li>Contains fibres and bonding agents</li> <li>Lightweight polystyrene aggregate</li> <li>See product data sheet Lustro P246.de</li> </ul>			
Tay Ton	Luis	30 kg	36 bags/pallet	0.8 mm	Layer thickness 5 – 7 mm: Application quantity 7.0 – 10.0 kg/m <sup>2</sup>	Nat- ural white	00056445	<ul> <li>Mineral adhesive and basecoat for the timber construction (on request)</li> <li>Contains fibres and bonding agents</li> <li>See product data sheet Luis P247.de</li> </ul>			
MANUF PASTOL	Pastol	20 kg	24 buckets/pallet	-	Layer thickness 2 – 3 mm: Application quantity 2.8 – 4.2 kg/m <sup>2</sup>	White	00131123	<ul> <li>Organically bonded adhesive and basecoat mortar with lightweight aggregates</li> <li>Fibre and siloxane reinforced</li> <li>Impact resistant up to 55 Joules</li> <li>Water-repellent</li> <li>Very stable</li> <li>See product data sheet Pastol P394.de</li> </ul>			
	Pastol Dry	20 kg	42 bags/pallet	_	Layer thickness 2 – 3 mm: Application quantity 2.4 – 3.2 kg/m <sup>2</sup>	Nat- ural white	00538193	<ul> <li>Organically bonded, fibre-reinforced bonding and reinforcement mortar with mineral lightweight aggregates in powder form delivering a high yield.</li> <li>Water-repellent</li> <li>Very stable</li> <li>See product data sheet Pastol Dry P394b.de</li> </ul>			



Product	Product description	Application	Packaging unit	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Material number	Notes
Reinforcement mesh						
	Reinforcement mesh 4x4 mm	Width 1100 mm	55 m²/roll 30 rolls / pallet	1.1 m <sup>2</sup>	00268045	<ul> <li>High strength, permanent, alkaline resistant reinforcement mesh</li> <li>Mesh spacing 4 x 4 mm</li> <li>Apply approx. 165 g/m²</li> <li>Non-displaceable</li> <li>See product data sheet Reinforcement mesh 4x4 mm K445a.de</li> </ul>
	Reinforcement mesh 5x5 mm	Width 1100 mm	55 m²/roll 24 rolls / pallet	1.1 m <sup>2</sup>	00015230	<ul> <li>High strength, permanent, alkaline resistant reinforcement mesh</li> <li>Mesh spacing 5 x 5 mm</li> <li>Apply approx. 205 g/m²</li> <li>Non-displaceable</li> <li>See product data sheet Reinforcement mesh 5x5 mm K445b.de</li> </ul>
	Reinforcement mesh Pastol	Width 1000 mm	50 m <sup>2</sup> /roll 30 rolls / pallet	1.1 m <sup>2</sup>	00056623	<ul> <li>Permanent, alkaline resistant reinforcement mesh for use with Pastol / Pastol Dry</li> <li>Mesh spacing 3 x 4 mm</li> <li>Apply approx. 150 g/m²</li> </ul>
Plinth connection						
Plinth	Plinth connection profile	30 mm 40 mm 50 mm 60 mm 80 mm	10 pieces/bundle	1 m	00112462 00016189 00059602 00047716 00056075 00016192	<ul> <li>Plinth connection profile made of aluminum without drain edge with upward bevel and additional drip edge</li> <li>Up to 200 mm single piece projection, from 220 mm two-piece projection</li> </ul>
		120 mm 140 mm 160 mm 180 mm 200 mm	6 pieces / bundle		00016040 00112463 00112464 00112465 00112466	<ul> <li>Length: 2500 mm</li> <li>In combination with the plinth profile</li> <li>See product data sheet Plinth connection profile P385s.de</li> </ul>
		Variable 220 – 300 mm	4 pieces / bundle		00124187	

## Reinforcement layer I Reinforcement mesh

## **Product overview**



Product	Product description	Application	Packaging unit	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Material number	Notes
Plinth connection						
	Plinth profile	6 mm	15 pieces /	1 m	00111986	■ Plinth connection profile for plinth
		10 mm	pack		00123501	connection end profile
		14 mm			00111987	<ul> <li>Length: 2500 mm</li> <li>Mesh width: 100 mm</li> <li>Drip edge: 6 mm, 10 mm or 14 mm</li> <li>14 mm suitable for scratch render systems</li> <li>See product data sheet Plinth connection profile P385s.de</li> </ul>
1	Assembly Kit for plinth end profile				00111756	<ul> <li>For plinth end profile</li> <li>10x H connectors</li> <li>50x washers size 3 mm</li> <li>75 x nailable plug Ø 8 mm, 80 mm length</li> <li>See product data sheet Plinth connection profile P385s.de</li> </ul>
	Peri plinth	3 mm	25 pieces /	1 m	00215820 00215821	■ For thermal-bridge free plinth
		7 mm	pack			connection
	end profile	17 mm			00215822	<ul> <li>With drip and drain edge and integrated reinforcement mesh</li> <li>Length: 2000 mm</li> <li>Mesh width: 125 mm</li> <li>For use with an overhang of the façade insulation to the plinth insulation up to 50 mm</li> <li>See product data sheet Plinth connection end profile P385p.de</li> </ul>
	Peri	50 – 90 mm	15 pieces /	1 m	00420103	■ Plastic profile for supporting Peri
	installation rail	100 – 140 mm	pack		00420104	plinth end profile  For insulation thicknesses from 50 to
PATRICE	Idii	160 – 200 mm			00420105	■ Pot institution tricklesses from 50 to 300 mm ■ Length: 2000 mm ■ See product data sheet Plinth connection end profile P385p.de
	Peri		25 pieces /	1 m	00420106	■ Plastic profile as an extension of the
	extension		pack			Peri installation rail by 30 to 50 mm respectively  With insulation thickness > 200 to 300 mm  Length: 2000 mm  See product data sheet Plinth connection end profile P385p.de



	(Torramation)				
Product	Product description	Application	Packaging unit	Material number	Notes
Mesh corner angle					
	Mesh corner angle 100/150	100/150 mm	40 pieces / pack	00015238	<ul> <li>For corner reinforcement of inside and outside corners</li> <li>Length: 2500 mm</li> <li>Mesh width: 100/150 mm</li> <li>See product data sheet Gewebeeckwinkel mesh corner angle 100/150 P385w.de</li> </ul>
	Roll of corner angle 125/125	125/125 mm	50 m/roll 30 rolls / pallet	00040968	<ul> <li>For corner reinforcement of inside and outside corners with variable angle</li> <li>Mesh width: 2x 125 mm</li> <li>See product data sheet Roll of corner angle P384a.de</li> </ul>
	Panzereckwinkel reinforced corner angle 70/90	70/90 mm	50 m/roll 40 rolls / pallet	00521890	<ul> <li>For corner reinforcement of inside and outside corners</li> <li>Mesh width: 70/90 mm</li> <li>See product data sheet Panzereckwinkel reinforced corner angle 70/90 P385y.de</li> </ul>
	Gewebeeckpfeil mesh corner arrow	6 x 6 mm	50 pieces / pack	00015246	<ul> <li>■ For diagonal reinforcement of corner openings</li> <li>■ Dimensions: 560/400 mm x 330 mm</li> <li>■ Apply approx. 200 g/m²</li> </ul>
	Mesh corner angle lintel	Lintel corner	25 pieces / pack	00015244	<ul> <li>For installation in the corner areas lintel/reveal and for the diagonal reinforcement of window and door openings</li> <li>For reveals up to 200 mm</li> </ul>

## Reinforcement layer I Reinforcement mesh

## **Product overview**



Product	Product description	Application	Packaging unit	Material number	Notes
Mesh corner angle					
	Gewebeeckwinkel drip edge	Drip edge	25 pieces / pack	00015241	<ul> <li>Mesh corner angle with coded drain edge and integrated reinforcement mesh</li> <li>Length: 2000 mm</li> <li>Mesh width: 2x 125 mm</li> <li>See product data sheet Gewebeeckwinkel mesh corner angle drain edge P385k.de</li> </ul>
	Mesh corner angle drip edge	Drip edge 7 mm	10 pieces / pack	00178227	<ul> <li>Mesh corner angle for horizontal plaser connections</li> <li>With concealed drip edge</li> <li>Length: 2500 mm</li> <li>Mesh width: 2x 100 mm</li> <li>See product data sheet Gewebeeckwinkel mesh corner angle drip edge P385t.de</li> </ul>
	Mesh corner angle	11 mm	10 pieces / pack	00708407	■ Mesh corner angle with wide plastic arm and tapered
LAVA.	scratch render	17 mm		00708408	drain edge for scratch render (Mak3) and thick layer render systems ■ Length: 2500 mm ■ Mesh width: 2x 125 mm ■ See product data sheet Gewebeeckwinkel mesh corner angle scratch render P385v.de
	Mesh corner angle scratch render 7/14	7/14 mm	10 pieces / pack	00542759	<ul> <li>Mesh corner angle for thin layer reveal with scratch render (Mak3)</li> <li>Length: 2500 mm</li> <li>Reveal mesh width: 100 mm</li> <li>Surface mesh width: 150 mm</li> <li>See product data sheet Gewebeeckwinkel mesh corner angle scratch render 7/14 P385u.de</li> </ul>



Product	Product description	Application	Packaging unit	Material number	Notes
Expansion joint profi	les				
	Mesh profile expansion joint V shape	2500 mm	25 pieces / pack	00040924	<ul> <li>Control joint channel vertical for inside corners</li> <li>For building separation joints and section separation joints</li> <li>Joint width: 15 – 60 mm</li> <li>Length: 2500 mm</li> <li>Mesh width: 2x 100 mm</li> <li>For plaster thicknesses 6 – 12 mm (incl. finishing plaster)</li> <li>See product data sheet</li> <li>Mesh profile expansion joint V shape P385l.de</li> </ul>
	Mesh profile expansion joint E shape	2500 mm	25 pieces / pack	00522540	<ul> <li>Control joint channel vertical for surfaces</li> <li>For building separation joints, movement joints and section separation joints</li> <li>Joint width: 15 – 60 mm</li> <li>Length: 2500 mm</li> <li>Mesh width: 2x 100 mm</li> <li>For plaster thicknesses 6 – 12 mm (incl. finishing plaster)</li> <li>See product data sheet</li> <li>Mesh profile expansion joint E shape P385q.de</li> </ul>
	Mesh profile expansion scratch render	2000 mm	25 pieces / pack	00061153	<ul> <li>Control joint channel for surfaces</li> <li>For scratch render (Mak3) and thick layer render systems</li> <li>Length: 2000 mm</li> <li>Mesh width: 2x 125 mm</li> <li>See product data sheet</li> <li>Mesh profile expansion joint scratch render P385i.de</li> </ul>
	Mesh profile expansion joint	2000 mm	25 pieces / pack	00521894	<ul> <li>Control joint channel vertical for surfaces and inside corner</li> <li>Joint width: 9 – 24 mm</li> <li>Flexible: 10 – 15 mm (surface), 5 – 6 mm (inside corner)</li> <li>Length: 2000 mm</li> <li>Mesh width: 2x 125 mm</li> <li>For plaster thicknesses 6 – 12 mm (incl. finishing plaster)</li> </ul>

## Reinforcement layer I Reinforcement mesh

## **Product overview**



Product	Product description	Application	Packaging unit	Material number	Notes
Connection profiles					
	Metal connection mesh profile	2000 mm	10 pieces / pack	00049993	<ul> <li>Connection profile for sheet metal coverings</li> <li>Upward bevel 6 mm</li> <li>Length: 2000 mm</li> <li>Mesh width: 125 mm</li> </ul>
	Mesh profile	6 mm	50 pieces / pack	00612065	■ Plaster stop profile
	plaster connection	10 mm	40 pieces / pack	00612069	■ Length: 2500 mm ■ Mesh width: 100 mm
	connection	14 mm	40 pieces / pack	00612072	<ul> <li>For plaster thicknesses 6, 10 or 14 mm</li> <li>See product data sheet</li> <li>Mesh profile plaster connection P385j.de</li> </ul>
	Mesh profile plaster connection with drip edge	2000 mm	25 pieces / pack	00783810	<ul> <li>Plaster stop profile</li> <li>Upward bevel 6 mm</li> <li>Length: 2000 mm</li> <li>Mesh width: 125 mm</li> <li>See product data sheet</li> <li>Mesh profile plaster connection with drip edge P313a.de</li> </ul>
	Attika mesh profile	2500 mm	10 pieces / pack	00521895	<ul> <li>Mesh profile as a plaster stop on fascia and window sill</li> <li>With additional adhesive tape for attachment of the foil to the 2nd sealing layer under the window sills</li> <li>Length: 2500 mm</li> <li>Mesh width: 100 mm</li> <li>See product data sheet</li> <li>Mesh profile fascia P385h.de</li> </ul>
inner	Balustrade profile	2000 mm	15 pieces / pack	00639839	<ul> <li>Balustrade connection profile</li> <li>With soft, transparent drip edge</li> <li>Length: 2000 mm</li> <li>Mesh width: 125 mm</li> <li>See product data sheet Balustrade profile P385r.de</li> </ul>
	Plaster / ceramic transition profile	2500 mm	25 pieces / pack	00639840	<ul> <li>Profile for creation of a horizontal transition from plaster to ceramic</li> <li>Inclined limb creation for diversion of water</li> <li>Length: 2500 mm</li> <li>Mesh width: 125 mm</li> <li>See product data sheet Transition profile plaster/ceramics P385x.de</li> </ul>



Product	Product description	Application	Packaging unit	Material number	Notes
Connection profiles					
	Window connection profile Duo G10	2600 mm	40 pieces / pack	00613031	<ul> <li>Two part connection profile for windows and doors</li> <li>Optically appealing plaster connection (shadow gap)</li> <li>For plaster thicknesses of 6 – 15 mm (incl. finishing plaster)</li> <li>Length: 2600 mm</li> <li>Mesh width: 120 mm</li> <li>Driving-rain proof</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile Duo G10 P384c.de</li> </ul>
	Window connection profile Duo G6	2600 mm	40 pieces / pack	00611987	<ul> <li>Two part connection profile for windows and doors</li> <li>Optically appealing plaster connection (shadow gap)</li> <li>For plaster thicknesses of 6 – 12 mm (incl. finishing plaster)</li> <li>Length: 2600 mm</li> <li>Mesh width: 120 mm</li> <li>Driving-rain proof</li> <li>Movement absorption class B</li> <li>See product data sheet Window connection profile Duo G6 P385m.de</li> </ul>
	Window connection profile front mounted roller shutters	2400 mm	25 pieces / pack	00783809	<ul> <li>Connection profile for roller blind guide rails</li> <li>For plaster thicknesses 6 – 10 mm</li> <li>Length: 2400 mm</li> <li>Mesh width: 125 mm</li> <li>Driving-rain proof</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile front mounted roller shutters P385z.de</li> </ul>
	Window connection profile Universal Pro	2400 mm	25 pieces / pack	00612009	<ul> <li>Connection profile with compressed PUR joint sealing foam</li> <li>Optically appealing plaster connection (shadow gap)</li> <li>Length: 2400 mm</li> <li>Mesh width: 125 mm</li> <li>Driving-rain proof with a joint width of 3 – 9 mm and up to 600 Pa for all thin-layer finish coats</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile Universal Pro P385n.de</li> </ul>
	Window connection profile Universal-K Pro	2400 mm	25 pieces / pack	00612010	<ul> <li>Connection profile for scratch render with compressed PUR joint sealing foam</li> <li>Optically appealing plaster connection (shadow gap)</li> <li>Length: 2400 mm</li> <li>Mesh width: 125 mm</li> <li>Driving-rain proof with a joint width of 3 – 9 mm and up to 600 Pa for scratch render (Mak3)</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile Universal K-Pro P385o.de</li> </ul>

## Reinforcement layer I Reinforcement mesh

## **Product overview**



Product	Product description	Application	Packaging unit	Material number	Notes
Connection profiles					
	Window connection profile flexible	2400 mm	25 pieces / pack	00751330	<ul> <li>Connection profile for windows and doors</li> <li>Optically appealing plaster connection (shadow gap)</li> <li>For plaster thicknesses 6 – 12 mm</li> <li>Length: 2400 mm</li> <li>Mesh width: 100 mm</li> <li>Driving-rain proof</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile flexible P385b.de</li> </ul>
	Window connection profile Milano	2400 mm	25 pieces / pack	00521873	<ul> <li>Connection profile for windows, doors and roller blind units</li> <li>For plaster thicknesses 6 – 10 mm</li> <li>With TPE loop and protective lip</li> <li>Length: 2400 mm</li> <li>Mesh width: 125 mm</li> <li>Driving-rain proof</li> <li>Movement absorption class A</li> <li>See product data sheet Window connection profile Milano P385f.de</li> </ul>
Accessories					
	SR Band tape	20 m	1 piece	00062345	<ul> <li>Compressible grooved tape</li> <li>Self-adhesive</li> <li>As a protective buffer for plaster connections, e.g. to the aluminium window sill</li> <li>Tape width 56 mm, can be divided into 38 mm and 18 mm</li> <li>See product data sheet SR Band tape P386a.de</li> </ul>
	Joint sealing tape FD	2 – 6 mm / 18 m	5 pieces / pack	00525641	delayed expansion for the creation of driving-rain proof connections
0		3 – 9 mm / 12 m	5 pieces / pack	00525642	<ul> <li>Tape width: 15 mm</li> <li>See product data sheet Joint sealing tape FD P386c.de</li> </ul>
		5 – 12 mm / 9 m	5 pieces / pack	00525643	



#### **Application**

#### **Basecoat**

The reinforcement mortar is referred to as basecoat in the approvals and in ETICS is a component of the rendering/plastering system. Its purpose is to protect the ETICS permanently from the effects of weather. The reinforcement mesh embedded in the basecoat ensures that the hygrothermal stress is safely absorbed and distributed across a large area. The basecoat is the basis for the subsequent final coating.

#### Reinforcement mesh

Knauf reinforcement meshes are high strength, permanent, alkaline resistant reinforcement meshes made of glass fibres. The mesh is resistant to sliding and includes blue markings for mesh overlap indication. In addition to the mesh spacings 4x4 mm, 5x5 mm and 3x4 mm (Pastol), meshes differ in terms of their tensile strengths, the weight per unit area and rigidity. They have the function of a reinforcement to avoid the formation of cracks to minimize and prevent the ingress of moisture into the system. The reinforcement mesh is embedded into the fresh basecoat. The position of the basecoat depends on its render thickness.

#### Number of mesh layers dependent on the grain size and luminosity

Finish coat	Graining	Luminosity of the final c	uminosity of the final coat (or paint coat if necessary)						
	mm	100 to 30	29 to 25	24 to 20	Fassadol TSR <sup>1)</sup> < <b>20</b>				
MineralAktiv Scheibenputz floated render	1.5 – 3.0	•	•	•	-				
MineralAktiv Scheibenputz Dry floated render	2.0 – 3.0	•	•	•	-				
RP 240, SP 260 Pro	2.0 - 5.0	•	•	•	•				
Noblo	1.5	••	••	••	••				
Noblo	2.0 - 3.0	•	•	•	•				
Noblo Filz	1.0	•	•	•	•				
SM700 Pro	1.0	•	•	•	•				
SM700 Pro (combed trowel finish)	1.0	•	On request	On request	On request				
Mak3	2.0 - 3.0	•	On request	On request	-				
Conni S, Addi S	1.5 – 2.0	•	•	•	•				
Conni S, Addi S	3.0	•	•	•	•				

<sup>1)</sup> Functionality only on at least 5 mm thick mineral reinforcement layer and only also on white, newly created final coats.

#### Thickness of the reinforcement layer and position of the reinforcement mesh

System	Basecoat	Layer thickness <sup>2)</sup>	Reinforcement mesh	Mesh arrangement in the reinforcement layer	Mesh reinforcement joint overlap
Scratch render	SM300	7 mm		Upper half	
SM30	SM700 Pro	5 – 10 mm		■ Up to 4 mm: at centre ■ > 4 to 7 mm: Exterior half ■ > 7 mm	≥ 100 mm
	SM300 Sockel-SM	5 – 7 mm	Reinforcing mesh 4x4 mm		
Mineral / organic	Lustro	5 – 15 mm (> 10 mm double-layer)	or 5x5 mm		
Lustro	Luis	4 – 5 mm or 7 mm			
	SM300	3 – 5 mm	Reinforcement mesh 4x4 mm	Exterior third	
Organic	Pastol, Pastol Dry	2 – 3 mm	Reinforcement mesh Pastol	Centred	

<sup>2)</sup> A reinforcement thickness of 7 mm is fundamentally recommended for wood fibre insulation boards. With Noblo 1.5 mm an additional mesh layer is recommended.

Single-layer mesh reinforcement

<sup>• •</sup> Double-layer mesh reinforcement

### Reinforcement layer I Reinforcement mesh

### **Application**



#### **Application**

#### Substrate

Insulation panels must be dust-free and free of impurities. The dowels or staples placed beforehand are recessed or flat and level. The surface of wood fibre insulation boards are initially treated with a press skim and the applied render may not exceed a moisture content of maximum 13% by weight. The changes in material moisture content due to air humidity must be taken into consideration. In case it is left to dry for an extended time, the insulation board surface must be thoroughly brushed off.

#### Application on wood soft fibre or non coated mineral wool insulation material

Initially apply basecoat as a surface-pressed layer on the board surface. Then the basecoat layer is subsequently built up as wet plaster on wet

#### Insertion of mesh elements and area mesh

At the inside corners of openings (e.g. window reveal - lintel), embed reinforcement mesh strips or mesh corner angle reinforcement fully into the basecoat. Subsequently apply Gewebeeckwinkel mesh corner angles perpendicular and flush. Apply the reinforcement layer and level it.

Alternatively, extending diagonally from the opening corners embed Gewebeeckpfeile mesh corner arrows or approx. 300 x 500 mm strips of reinforcement mesh in the fresh mortar.

Subsequently embed Armiergewebe reinforcement mesh on the entire surface with at least a joint overlap of 100 mm fresh-in-fresh in the basecoat layer. Apply a full covering of basecoat to the mesh.

The mesh is arranged in the centre when the basecoat thickness is up to 4 mm, for 5 to 7 mm layer thickness it is in the upper half of the basecoat layer and for > 7 mm in the exterior third.

#### Application of double area mesh

First of all, a first layer of basecoat is applied with a thickness of 2 to 3 mm, in timber construction approx. 4 mm, with inserted mesh and an overlap of the mesh sheets of approx. 100 mm. After the first basecoat layer has hardened, the second basecoat layer is applied. Alternatively, a second basecoat layer can also be applied onto the fresh first basecoat layer. Ensure that the second mesh layer is laid and embedded with a joint offset of ≥ 100 mm to the first mesh layer and an overlap of ≥ 100 mm between the mesh sheets. The thickness of the basecoat layers is 2 to 3 mm for each layer. In both cases, the diagonal reinforcements are embedded before the second mesh layer.

Note

Scratch render: The layer thickness of SM300 must be approx. 7 mm. On the reinforcing mesh apply at least 2 to 3 mm SM300 and after initial setting roughen the surface horizontally with a brush. The mesh may not become

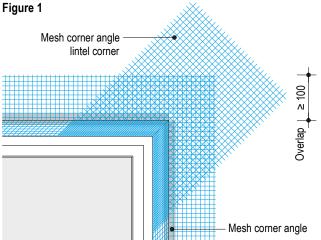
#### Completion work

Avoid excessive smoothing of the reinforcement layer to prevent a concentration of fine particles or formation of a sinter layer on the surface. Rub off any burrs that have formed when drying.

Plasters should be separated from components with a separation cut, profiles or similar.

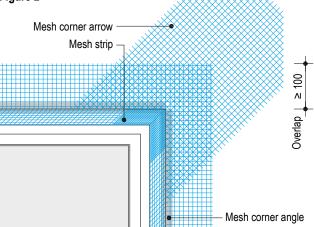
### Reinforcement of window lintel/reveal

Dimensions in mm



The lintel / reveal corner areas require additional Gewebeeckwinkel Sturzecke mesh corner angle reinforcement.

Figure 2



Alternatively, the lintel/reveal corner areas can be reinforced with Gewebeeckpfeile mesh corner arrow or reinforcement mesh strips.

#### Basecoat drying time

Before application of a further coating (primer / basecoat) it is important to ensure that the surface is fully dry. The minimum drying time is generally approx. 1 day/mm layer thickness. In case of unfavourable weather conditions (e.g. high air humidity or low temperatures) the drying time will be extended. For further information please refer to the product data sheets of the subsequent coatings.





#### **Application (Continuation)**

#### Plinth and splash water zone

Apply at least 5 mm basecoat covering the full surface and embed reinforcement mesh 4x4 mm or 5x5 mm to the entire surface in the upper third of the basecoat. Stagger the joints by at least 100 mm.

When insulation is applied in areas contacting the soil, the reinforcement layer ends underneath the edge of the future ground line.

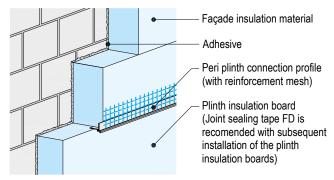
#### Thermal bridge free Peri plinth end profile

Apply the basecoat on the insulation material, push in the Peri plinth connection profile between the perimeter / plinth insulation and the façade insulation or Peri installation rail and the façade insulation, align flush and embed the reinforcement mesh.

Connect the profiles with the supplied connectors. Provide the outside corners with the appropriate mitring or suitable corner elements.

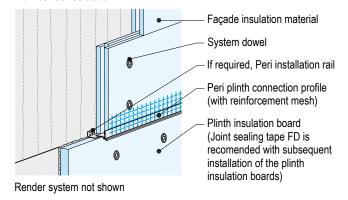
When implementing the transition between the façade and the plinth application, driving-rain proofing must be observed. After subsequent installation of plinth insulation boards or continuous plinth end profiles, Joint sealing tape FD must be used at the level of the plinth insulation.

#### In solid construction



Render system and dowelling not shown

#### In timber construction



#### Machine technology from Knauf PFT for the application

Product	Mixing pump/feed pump	Stator/ rotor	Mortar hoses	Wet mortar pumping distance
0M700 D	G 4	D4-3 with Rotoquirl	Ø 25 mm	Up to 30 m
SM700 Pro	RITMO L plus	B4-2L with Rotomix	Ø 25 mm	Up to 20 m
	G 4	D4-3	Ø 25 mm	Up to 30 m
SM300	RITMO L plus	B4-2L	Ø 25 mm	Up to 20 m
	PuMax	ex-works	Ø 35 + 25 mm	Up to 30 m Up to 20 m Up to 30 m Up to 20 m Up to 20 m Up to 65 m Up to 30 m Up to 15 m Up to 30 m Up to 20 m Up to 20 m Up to 20 m Up to 40 m Up to 20 m Up to 20 m Up to 20 m Up to 30 m Up to 20 m Up to 30 m Up to 20 m Up to 30 m Up to 30 m Up to 30 m
ockel-SM Pro, Sockel-SM	G 4	D4-3 with Rotoquirl	Ø 25 mm	Up to 30 m
DOUCKEI-SIVI PTO, SOUKEI-SIVI	RITMO L plus	B4-2L with Rotomix	Ø 25 mm	Up to 15 m
uo-Kleber adhesive	G 4	D4-3	Ø 25 mm	Up to 30 m
Juo-Niebei auriesive	RITMO L plus	B4-2L	Ø 25 mm	Up to 30 m Up to 20 m
uetro	G 4	D4-3	Ø 25 mm	Up to 40 m
ustro	RITMO L plus	B4-2L	Ø 25 mm	distance Up to 30 m Up to 20 m Up to 30 m Up to 20 m Up to 20 m Up to 65 m Up to 30 m Up to 15 m Up to 30 m Up to 20 m Up to 20 m Up to 40 m Up to 40 m Up to 20 m Up to 20 m Up to 20 m Up to 20 m Up to 30 m Up to 30 m Up to 30 m
uis	G 4	D4-3 1/2 capacity	Ø 25 mm	Up to 40 m
	RITMO L plus	B4-2 L	Ø 25 mm	Up to 20 m
Pastol	SWING M	C4-2	Ø 25 mm	Up to 20 m
asiui	SWING L	D6-3 Twister	Ø 25 mm	Up to 30 m
	RITMO XL	D6-3 Twister	Ø 25 mm	Up to 30 m
Pootal Dry	RITMO L plus	B4-2 L	Ø 25 mm	Up to 20 m
Pastol Dry	G 4	D3-4	Ø 25 mm	Up to 25 m

For further information on machine engineering see: pft.net

### Finish coat

### **Product overview**



#### **Product overview**

Product	Product description	Appli- cation	Packaging unit	Grain	<b>Consumption</b> per m <sup>2</sup> façade/ plinth	Colour	Material number	Notes
Primer between base	coat and finish	coat						
	Quarzgrund	5 kg	68 buckets/pallet	-	0.17 kg	White	00479781	■ Quick drying and
F 7	pro					Pigmented	00517586	ready-mixed bonding
KNAUF QUARZGRUND		15 kg	32 buckets/pallet	-	0.17 kg	White	00479779	primer for finish coats  See product data
han defector care as						Pigmented	00479782	sheet Quarzgrund Pro K457b.de
	Isogrund	5 kg	68 buckets/pallet	-	0.10 kg	White	00015162	■ Ready-mixed suc-
ISOGRUND  State St		15 kg	24 buckets/pallet	-	0.10 kg	White	00005691	tion block for plasters on a synthetic resin emulsion basis  Alkaline resistant Diluted: 1:1 with water See product da- ta sheet Isogrund K455a.de
Finishing plasters for	r the façade							
	MineralAktiv	25 kg	24 buckets/pallet	1.5 mm	approx. 2.4 kg	White	00525684	■ Hybrid floated render
	Scheiben-					Pigmented	00525688	with optimized mois-
7	putz floated render			2.0 mm	approx. 3.2 kg	White	00525685	ture management  Without biocide for-
KNAUF SCHEIBENPUTZ	Telluei					Pigmented	00525691	mulation
The second secon				3.0 mm	approx. 4.2 kg	White	00525686	■ See product data
						Pigmented	00525692	sheet MineralAktiv Scheibenputz floated render P239m.de
	MineralAk-	25 kg 42 bags/pallet	42 bags/pallet	2.0 mm	approx. 2.4 kg	White	00741403	<ul> <li>Hybrid floated render with optimized mois-</li> </ul>
	tiv Schei-					Pigmented	00741428	
	benputz Dry floated ren-			3.0 mm	approx. 3.4 kg	White	00741429	ture management
The state of the s	der					Pigmented	00741430	<ul> <li>Biocide-free</li> <li>See product data sheet MineralAktiv Scheibenputz</li> <li>Dry floated render</li> <li>P277b.de</li> </ul>
-	SP 260 Pro	25 kg	42 bags/pallet	2.0 mm	approx. 3.2 kg	White	00705117	■ Universal floated
						Pigmented	00705120	render  Biocide-free
				3.0 mm	approx. 3.4 kg	White	00705118	■ See product data
pression was bounded						Pigmented	00705121	sheet SP 260 Pro
				5.0 mm	approx. 5.0 kg	White	00705119	P277c.de
						Pigmented	00705123	
	Noblo	25 kg	42 bags/pallet	1.5 mm	approx. 2.3 kg	White	00741432	■ Mineral finishing coat
						Pigmented	00741433	with marble grains as a floated render
The state of the s				2.0 mm	approx. 2.8 kg	White	00741435	texture
Same Marine				3.0 mm	approx. 3.4 kg	Pigmented	00741434	■ Biocide-free
						White	00741436	■ See product data
						Pigmented	00741438	sheet Noblo P561.de



Product	Product description	Appli- cation	Packaging unit	Grain	Consumption per m <sup>2</sup> façade/plinth	Colour	Material number	Notes	
Finishing plasters for	the façade								
	Noblo Filz	25 kg	42 bags/ pallet	1.0 mm	Layer thickness approx. 2 mm: Application quantity approx. 3.2 kg	White Pigmented	00741439 00741440	<ul> <li>Fine sponged and floated render with marble grains</li> <li>Biocide-free</li> <li>See product data sheet Noblo Filz P561f.de</li> </ul>	
	RP 240	25 kg	42 bags/	2.0 mm	approx. 3.1 kg	White	00763705	■ Mineral groove render	
			pallet	1		Pigmented	00763712	<ul><li>Biocide-free</li><li>See product data sheet</li></ul>	
				3.0 mm	approx. 3.8 kg	White	00763713	RP 240 P276a.de	
						Pigmented	00763794		
	of grade			5.0 mm	approx. 5.0 kg	White	00763798	<ul> <li>Mineral groove render</li> <li>Biocide-free</li> <li>Cannot be pigmented</li> <li>See product data sheet</li> <li>RP 240 P276a.de</li> </ul>	
	SM700 Pro	25 kg	42 bags/ pallet	1.0 mm	■ Sponged, layer thickness approx. 3 mm: Application quantity approx. 4.2 kg ■ Combed trowel finish, average layer thickness approx. 10 mm: Application quantity approx. 14.0 kg ■ Freely styled texture, layer thickness approx. 3 – 10 mm: Application quantity 4.0 – 14.0 kg	White Pigmented	00164930 00167798	<ul> <li>Sponged and fine render</li> <li>Contains fibres and bonding agents</li> <li>Biocide-free</li> <li>See product data sheet SM700 Pro P241c.de</li> </ul>	
	Mak3	25 kg	42 bags/ pallet	2.0 mm	Unscratched layer thickness 12 mm:	Natural white	00741388	<ul> <li>Scratch render with a mica additive</li> </ul>	
hu St					Application quantity	White	00741391	<ul><li>Self-cleaning effect</li><li>Biocide-free</li></ul>	
					22.0 kg	Pigmented	00741389	■ Light reflection possible	
			42 bags/ pallet	3.0 mm	Unscratched layer thickness 13 mm:	Natural white	00741395	due to mica additive  See product data sheet	
					Application quantity	White	00741400	Mak3 P272.de	
					23.0 kg	Pigmented	00741398		
	Conni S	25 kg	24 buckets/	1.5 mm	approx. 2.2 kg	White	00040950	■ Silicone resin floated	
			pallet			Pigmented	00477773	render  See product data sheet	
CONNI 5			2	2.0 mm	approx. 2.8 kg	White	00040951	Conni S P238.de	
25 kg						Pigmented	00044794		
A DECAME			3.0		approx. 3.7 kg	White	00040952		
						Pigmented	00477774		

### Finish coat

### **Product overview**



Product	Product description	Appli- cation	Packaging unit	Grain	Consumption per m <sup>2</sup> façade/plinth	Colour	Material number	Notes
Finishing plasters for	the façade							
	Addi S	25 kg	24 buckets/	1.5 mm	approx. 2.2 kg	White	00040960	■ Silicone resin reinforced
			pallet			Pigmented	00044798	floated render
				2.0 mm	approx. 2.8 kg	White	00040962	<ul><li>See product data sheet Addi S P237.de</li></ul>
KNAUF ADDIS						Pigmented	00477888	7100101207.00
25 kg				3.0 mm	approx. 3.7 kg	White	00040963	
7-3-1-31 to (12-) Auto-						Pigmented	00477889	
Render finish for the	plinth area							
In the second se	Sockel-SM Pro	25 kg	42 bags/ pallet	1.0 mm	Layer thickness 2.0 mm: Application quantity 3.0 kg	Grey	00741450	<ul> <li>Polymer-modified, mineral-based render finish with integrated moisture protection for the plinth</li> <li>Non-conductive capillary action</li> <li>Contains sealant, fibres and bonding agents</li> <li>No additional moisture protection is necessary if the total render thickness is ≥ 7 mm.</li> <li>See product data sheet Sockel-SM Pro P213a.de</li> </ul>
han the state of t	Sockel-SM	25 kg	42 bags/ pallet	1.0 mm	Layer thickness 2.0 mm: Application quantity 3.0 kg	Grey	00741451	<ul> <li>Mineral finishing coat for the plinth area</li> <li>Contains fibres and bonding agents</li> <li>Can be sponged</li> <li>High impact load</li> <li>See product data sheet Sockel-SM P213.de</li> </ul>
	Butz	25 kg	24 buckets/ pallet	2.0 mm	Layer thickness 2.0 mm:	Anthricite	00040917	■ Ready-to-use, paste- like coloured stone
					Application quantity 4.5 kg	Coral	00040919	render with washed plaster effect
KNAUF BUTZ  15 No State Control of the Control of t		20 kg	24 buckets/ pallet	2.0 mm	Layer thickness 2.0 mm: Application quantity 4.5 kg	Grisall	00063333	<ul> <li>Permanent driving-rain protection</li> <li>Scratch and impact-proof</li> <li>See product data sheet Butz P234a.de</li> </ul>



#### **Application**

#### Finish coat

Top coats from Knauf are safe, permanent and stylish and match every architectural style. With the best recipes, diverse range of grain sizes and unmistakable distinctive appearance. The are the perfect finish for every WARM WALL system and allow the insulated façade to shine in a wide variety of colours and textures.

#### MineralAktiv Scheibenputz floated render, MineralAktiv Scheibenputz Dry floated render

MineralAktiv Scheibenputz floated render and MineralAktiv Scheibenputz Dry floated render are manufactured without formulation to control and inhibit growth of algae and fungi. Optimized moisture management to prevent growth of algae and fungi is achieved in conjunction with MineralAktiv Fassadenfarbe paint.

#### Noblo, SP 260 Pro, RP 240

Mineral finishing renders as a floated render texture (Noblo and SP 260 Pro) and/or groove render texture (RP 240).

#### **Noblo Filz**

Mineral-based, fine grain finishing plaster with 1.0 marble grains for fine sponged surface finishes or as a floated render.

#### SM700 Pro

The mineral based, universal all-rounder for façades and plinths can be sponge finished or freely-structured as a natural white or coloured top coat. SM700 Pro can also be applied as a broom finish or combed finish designs for special highlights on the façade.

#### Mak3

Classic mineral scratch render with a mica additive with its plaster thickness offers very good protection against the effects of weather and its surface features a self-cleaning effect.

#### Conni S

Ready-to-use, paste-like, soiling-resistant silicone resin floated render, highly water-repellent and highly water permeable.

#### Addi S

Ready-to-use, paste-like, organically bonded and silicone resin reinforced floated render for intensive colour shades. Very extra-hard wearing, water-repellent and water-vapour-permeable.

#### Sockel-SM Pro, Sockel-SM

Mineral based universal all rounder on a cementitious basis for the plinth area. Use as an adhesive and reinforcing mortar as well as a sponged finish coat. When using Sockel-SM Pro as a basecoat and render finish with a total render thickness  $\geq$  7 mm, no additional protection for the render against ground moisture (moisture protection) is necessary as Sockel-SM Pro is non-capilliary.

#### Butz

Coloured stone render with washed plaster effect for surface design in areas subject to wear and tear, e.g. plinth surfaces in the splash water zone.

#### Primer

Use of a primer ensures a uniform absorption behaviour of the surface. Isogrund is used here to avoid absorbency problems and Quarzgrund Pro serves as a bonding layer between the basecoat and the finishing render.

#### Properties of finish coats for façades and plinth / splash water area

Properties	Mineral-based fini	shing plasters	Organic fin	Organic finishing plasters					
	MineralAktiv Scheibenputz floated render, MineralAktiv Scheibenputz Dry floated render	Noblo Filz, Noblo, SP 260 Pro, RP 240	SM700 Pro	Mak3	Sockel-SM Pro	Sockel-SM	Silicon resi	n renders Butz	Resin plasters Addi S
Binder	Hybrid binder	Lime cement	Lime cement	Lime cement	Cement	Cement	Silicone resin emulsion, dispersion	Silicone resin emulsion, dispersion	Polymer dispersion, silicone resin
Hydrophobic (water-repellent)	••	••	••	••	••••	•••	••••	••••	•••
Diffusion properties	••••	••••	••••	••••	••	••	•••	••	•
Colour shade range	••	••	••	••	•	•	•••	••	••••
Resistance to soiling	••••	••••	••••	••••	••••	••••	••••	••••	•••
Plinth/splash water area	••	••	••••		••••	••••	•••	••••	••

•••• Ideal

● ● Ideal to very well suited

Very suitable

Suitable

#### Finish coat

#### **Application**



#### **Application**

#### Application of finish coats for façades and plinth / splash water area

Criteria Mineral-based finishing plasters							Organic finishing plasters				
	MineralAktiv Scheibenputz floated render	MineralAktiv Scheibenputz Dry floated render	Noblo, SP 260 Pro	Noblo Filz	RP 240	SM700 Pro	Mak3	Sockel-SM Pro, Sockel-SM	Silicon r ders Conni S	Butz	Resin plasters Addi S
Surfaces											
Sponged texture				•		•		•			
Scratched texture							•				
Freely styled texture				•		•					
Textured floated render	•	•	•	•					•		•
Textured groove render					•						
Application											
By machine	•	•	•	•	•	•	•	•	•		•
By hand	•	•	•	•	•	•	•	•	•	•	•
Order information											
Bucket (paste-like)	•								•	•	•
Bagged material		•	•	•	•	•	•	•			

#### Primer

Stir the contents of the container thoroughly and repeat occasionally.

With thin-layer mineral-based finishing coats, when required use undiluted Quartzgrund Pro, or Isogrund, diluted 1:1 with clean water and apply uniformly with a roller to the entire surface or apply using a suitable spray device.

With Conni and Addi: Apply undiluted Quarzgrund Pro uniformly using a roller or brush and spread crosswise. Avoid streaking. When applying pigmented Conni and Addi, Quarzgrund Pro pigmented in the same or similar colour shade is recommended.

After application of Quarzgrund Pro observe a drying time of at least 2 hours and after application of Isogrund observe a drying time of at least 12 hours.

#### Plaster application

Required water quantity and mixing of the mortar in acc. with the current product data sheet.

Check the containers before use to ensure that the colour shades are correct. When applying a shaded finish coat, ensure that the batch numbers are the same or only mix sufficient render required to finish a full rendered surface.

Slight differences in colour hues can occur due to the use of natural aggregates. When reordering, always state the consignment number of the previous delivery.

Ensure uniform grain distribution.

The type of tool used influences the surface roughness and it is therefore essential to use the same tool for a consistent finish.

Ensure that there are sufficient workers available on every scaffolding level to avoid bothersome structural effects. Work quickly fresh in fresh and do not rework hardened surfaces. Avoid interruptions when working on continuous

surfaces and always complete the work on self-contained surfaces.

Plasters should be separated from components with a separation cut, profiles or similar.

Finish coat	Layer thickness in mm
Façade	
MineralAktiv Scheibenputz floated render, MineralAktiv Scheibenputz Dry floated render	Grain size
Noblo, SP 260 Pro, RP 240	Grain size
Noblo Filz (freely styled texture)	3 – 5
Noblo Filz (sponged)	2
SM700 Pro (sponged)	2-3
SM700 Pro (combed trowel finish)	10 (average layer thickness)
SM700 Pro (freely styled texture)	3 – 10
Mak3	10 (scratched)
Conni S, Addi S	Grain size
Plinth area	
Sockel-SM Pro (sponged) <sup>1)</sup> Sockel-SM (sponged) <sup>2)</sup>	2
Butz	2

- Only in conjunction with Sockel-SM Pro as a basecoat. Sockel-Dicht is unnecessary in case Sockel-SM Pro is used as a render system (basecoat and finish coat) in a total thickness ≥ 7 mm.
- 2) Only in conjunction with Sockel-SM as a basecoat.



#### **Application (Continuation)**

#### Plaster application (continued)

#### MineralAktiv Scheibenputz floated render, MineralAktiv Scheibenputz Dry floated render

Knauf MineralAktiv Scheibenputz floated render is applied over the entire surface in grain thickness with a stainless steel trowel, and directly after application it is worked uniformly and without interruption to the desired texture using a hard plastic trowel. A sponge rubber float produces a coarser more rustic texture finish.

#### Noblo, SP 260 Pro, RP 240

Apply the render with a stainless steel finishing trowel or trowel, spread flush in grain size and structure using a suitable tool.

#### **Noblo Filz**

Apply a fully covering coat of Noblo Filz in grain thickness, allow to stiffen and then apply a second coat in grain thickness, and immediately sponge / felt, without using water. Apply approx. 3 to 5 mm for free textures, spread flush and texture immediately with the required tool.

#### SM700 Pro

Apply SM700 Pro for sponged surfaces with a layer thickness of to approx. 3 mm to the basecoat. Start sponging or free texturing with initial setting of the SM700 Pro.

Surfaces, e.g. using a combed finish, are created with suitable tools/ templates in an average layer thickness of up to 10 mm.

For surfaces with a broom finish, apply approx. 3 mm SM700 Pro, spread and rule the still moist/damp surface in one go using a texturing broom.

#### Mak3

Apply the scratch render layer of approx. 13 or 14 mm by machine (application by hand only on small surfaces), level with the notched scraper and smoothen with the flooring trowel and consolidate (avoids trapped air bubbles). When initial setting commences, possible on the same day but usually on the following day, scratch in circular motions and remove small unevenness's with the scraper. The optimum scratch time is when the grain cracks when scratched. Premature scratching results in a darker colour and unclear structure.

#### Conni S, Addi S

Ready-to-use, paste-like finish coat must be mixed thoroughly. When necessary, a small quantity of water may be added to set the application consistency. Apply Conni S or Addi S (floated render texture) with a stainless steel trowel in grain size to the entire surface and trowel smooth with circular movements without interruption using a hard plastic trowel.

#### Plinth and splash water zone

Apply a primer to suit the selected top coat, observe the required drying times. Apply plinth renders, e.g. Sockel-SM Pro or Sockel-SM on the following day on the type-compatible reinforcement layer and sponge.

#### Sockel-SM

The layer thickness as a basecoat should be at least 5 to 7 mm. Apply Sockel-SM for sponged surfaces (layer thickness 1 to 2 mm) one day later at the earliest to the basecoat layer already applied with Sockel-SM. Sponge Sockel-SM as the mortar dries.

#### Sockel-SM Pro

When applying with Sockel-SM Pro render system in a total layer thickness (basecoat and finish coat) of at least 7 mm, additional moisture protection with Sockel-Dicht is unnecessary.

#### Butz

Allow a drying time of at least 2 hours before applying Butz on Quarzgrund Pro. Mix the contents of the container well, apply using a stainless steel trowel slightly thicker than the grain size and level in one direction.

#### Plaster seal / moisture protection

A plaster system (with exception of: Sockel-SM Pro) must be protected against the ingress of moisture in damp and splash water zone areas. This also applies for balconies, loggias, flat roofs and terraces.

The required plaster sealing or the necessary moisture protection must be applied up to at least 50 mm above the edge of the ground line or top edge of the covering. In case of stairs, the plaster sealing should be applied at least 80 mm above the step, as it is necessary to assume an increased exposure to moisture here. In our case, this must be applied up to the existing building sealing or perimeter insulation boards.

As plaster seal / moisture protection, Sockel-Dicht must be applied in a dry layer thickness of at least 1 mm (wet layer thickness at least 1.2 mm), in two work steps, e.g. with a trowel or wide (water) brush. In case of a paintable consistence, Sockel-Dicht is applied with a prime brush, in case of a plasterable consistence it is applied with a spatula, finishing trowel or trowel. The application is performed in two stages.

#### Mechanical protection in the plinth area

As protection for the plinth in the area contacting the soil against mechanical influences of the soil or gravel bed, use of on-site protective layer slip membrane (e.g. fleece and slip membrane with laminated dimpled sheet) up to the edge of the ground line.

#### Machine technology from Knauf PFT for the application

Product	Mixing pump/ feed pump	Stator/ rotor	Mortar hoses	Wet mortar pumping distance
Mineral, thin-layer finishing coats	G 4	D4-3	Ø 25 mm	Up to 30 m
(e.g. MineralAktiv Scheibenputz Dry, SP 260 Pro, RP 240 etc.)	RITMO L plus	B4-2L	Ø 25 mm	Up to 20 m
Scratch render (Mak3)	G 4	D6-3	Ø 35 + 35 + 25 mm	Up to 36 m
Paste-like finishing plasters (e.g. Ad-	SWING	C4-2	Ø 25 mm	Up to 20 m
di S, Conni S, MineralAktiv Scheiben- putz floated render)	RITMO L plus	B4-2L	Ø 25 mm	Up to 20 m

For further information on machine engineering see: pft.net

### **Product overview**



#### **Product overview**

Product	Product description	Appli- cation	Packaging unit	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Colour	Material number	Notes
Plaster seal / moisture	e protection						
The state of the s	Sockel-Dicht	25 kg	42 bags/pallet	Dry layer thickness min. 1.0 mm (two coats): Application quantity 1.8 kg	Grey	00055086	<ul> <li>Crack-bridging, mineral and flexible sealing slurry for use as a plaster sealant on exterior renders making contact with the soil</li> <li>Grain size 0.5 mm</li> <li>Impermeable to water</li> <li>Can be painted or plastered over</li> <li>Can be painted or applied lilke a mortar</li> <li>See product data sheet Sockel-Dicht P292a.de</li> </ul>
Primer between finish		-		0.471	14 n · ·	00740050	0.1.
	Casiol Grund	12.5	32 buckets/pallet	0.17	White	00748650	<ul> <li>Calcium silicate primer with integrated protection against</li> </ul>
CASIOL GRUND					Pigmented	00748656	Integrated protection against lime efflorescence  Ready-to-use  Highly vapour permeable  Capable of silification for subsequent coats with dispersion silicate based paint  Absorption regulating  EC1plus, very low emission certified acc. to GEV-EMICODE  Protects against lime efflorescence with mineral plasters  See product data sheet Casiol Grund B165C.de
Paint coat							
	MineralAk-	12.5	32 buckets/pallet	Double coat	White	00525717	■ Hybrid façade paint
	tiv Fassaden-	,		0.28   - 0.40	Pigmented	00525719	with optimized moisture
KNAUF FASSADENFAREE	farbe façade	51	68 buckets/pallet	Double coat	White	00778805	management
Date of the same of	paint			0.28   - 0.40	Pigmented	00778813	See product data sheet MineralAktiv Fassadenfarbe façade paint B135m.de
	Silicon-	12.5	32 buckets/pallet	Double coat	White	00021185	■ Colour shade equalizing
	harz-EG-Farbe			0.25   - 0.34	Pigmented	00037281	silicone resin paint
BAUT SUCCOMMAZ AGAMA	paint	51	68 buckets/pallet	Double coat 0.25 I – 0.34 I	White Pigmented	00021189 00037282	■ See product data sheet Siliconharz-EG-Farbe paint B133.de
	Autol	12.5	32 buckets/pallet	Double coat 0.25 I – 0.40 I	White Pigmented	00054597 00056027	■ Premium silicone resin façade paint with self-
haay AUTOL		51	68 buckets/pallet	Double coat 0.25 I – 0.40 I	White Pigmented	00060816 00061881	cleaning effect ■ See product data sheet Autol B131.de



### **Product overview (Continuation)**

Product	Product description	Appli- cation	Packaging unit	<b>Consumption</b> per m <sup>2</sup> façade/plinth	Colour	Material number	Notes
Paint coat							
MANY AUTOL	Autol TSR	12.5	32 buckets/ pallet	Double coat 0.25 I – 0.40 I	Pigmented	00748319	<ul> <li>Reflection-optimized premium silicone resin façade paint with self-cleaning effect</li> <li>For colour shades with luminosity &lt; 20</li> <li>See product data sheet Autol TSR B131T.de</li> </ul>
	Fassadol	12.5 I	32 buckets/	Double coat	White	00078636	■ Silicone-reinforced façade paint
			pallet	0.30   - 0.45	Pigmented	00080899	■ See product data sheet Fassadol
KNAUF FASSADOL			68 buckets/	Double coat	White	00080752	B132.de
251			0.301 – 0.451	Pigmented	00080753		
FASSADOL DE LE	Fassadol TSR	12.5	32 buckets/ pallet	Double coat 0.35 I – 0.45 I	Pigmented	00469269	<ul> <li>Reflection-optimized siloxane-reinforced façade paint</li> <li>For colour shades with luminosity &lt; 20</li> <li>See product data sheet Fassadol TSR B132T.de</li> </ul>
	Minerol	12.5 I	32 buckets/	Double coat	White	00178087	■ Highly vapour permeable silicon
IXAU MINEROL			pallet	0.251 – 0.401	Pigmented	00178145	resin façade paint ■ See product data sheet Minerol B135.de

### Application of paint coats on finish coats

Paint coat	Mineral-based fini	shing plasters	Organic finishing pla	asters		
	MineralAktiv Scheibenputz floated render, MineralAktiv Scheibenputz Dry floated render	Noblo Filz, Noblo, SP 260 Pro, RP 240, SM700 Pro	Mak3	Sockel-SM Pro, Sockel-SM	Silicon resin render Conni S	Resin plasters Addi S
MineralAktiv Fassadenfarbe façade paint	•••1)	•••				
Siliconharz-EG-Farbe paint		•••		••	••	•
Autol		•••		•••	•••	••
Autol TSR		•••		•••	•••	••
Fassadol		•••		•••	••	•••
Fassadol TSR		•••		•••	••	•••
Minerol		•••		•		

- 1) Constituent of MineralAktiv render system
- ••• Ideal
- Very suitable
- Suitable

#### **Application**



#### **Application**

#### Paint coat

The individual expression of a façade is greatly influenced by its colour shade. It supports the architecture and is a means of expressing style and lifestyle. But the paint not only determines the appearance of a house, it also fulfils an important protective function A breathable coat of high-quality paint from Knauf can protect a façade for a long time and increase the value of the home and property. Knauf exterior paints are very efficient and economical, easy to apply and produce perfect results.

#### MineralAktiv Fassadenfarbe façade paint

MineralAktiv Fassadenfarbe paint is a texture preserving, mineral façade paint with infra-red active paint pigments on a hybrid binder basis without film preservation. The optimised moisture management ensures that MineralAktiv Fassadenfarbe façade paint in a system with MineralAktiv finish coats is ideal in preventing growth of algae and mould. It has a high yield and an elegant mineral appearance.

#### Siliconharz-EG-Farbe paint

Siliconharz-EG-Farbe paint is especially suitable for equalisation (single coat) of mineral finishing coats with the same colour shade as the render and the paint. Suitable for equalisation of drying-related, weather-related or application-related differences in the colour shade on the finishing coat.

#### Autol

Autol is a highly permeable, matt, premium silicon resin self-cleaning effect façade paint. It is ideally suited as two paint coats on mineral and organically bound renders, as well as a top coat in case of different shades of finishing coat and paint. A strong reduction in the adhesion of dirt particles facilitates wash-off of dirt and soiling by the action of precipitation.

#### **Autol TSR**

Autol TSR is a highly permeable, matt, silicon resin self-cleaning effect façade paint. Reflection-optimised, resulting in reduced heat-up due to solar radiation and increased resistance to cracking on the substrate. It is used on new, pure white rendering/plastering systems when the colour shade of the final coat has a luminosity of < 20.

#### **Fassadol**

Fassadol is a highly permeable, matt and highly colour shade fast siliconereinforced façade paint. It is ideally suited as two paint coats for intensive colour shades on mineral and organically bound renders, as well as a top coat in case of different shades of finishing coat and paint.

#### Fassadol TSR

Fassadol TSR is a reflection-optimised, diffusion permeable, highly colour shade fast and high coverage siloxane-reinforced façade paint with a satinmatt appearance. It is is suitable for applying two coats on white, mineral and organic bonded plaster systems if the colour shade of the finish coat should have a luminosity of < 20.

#### Minerol

Minerol is a highly permeable, matt, premium silicate façade paint with organic stabilisers. It is ideally suited as a structure-retaining, two coat paint on mineral renders. Minerol bonds by silification with the substrate and is an ideal coating on mineral renders.

#### Properties of paint coats

Criteria	Mineral Hybrid façade paint MineralAktiv Fassadenfarbe façade paint	Silicate based dispersion Minerol	Organic Silicone resin paints Autol, Autol TSR	Siliconharz-EG-Farbe paint	Pure acrylic paint Fassadol, Fassadol TSR
Binder	Hybrid binder	Potassium silicate, dispersion	Silicone resin emulsion, dispersion	Silicone resin emulsion, dispersion	Pure acrylic
Hydrophobic (water-repellent)	•••	•••	••••	••••	••••
Diffusion properties	••••	••••	••••	•••	••
Colour shade range	••	••	•••	••	••••
Resistance to ageing	••••	••••	••••	••••	••••
Hiding power	••••	•••	••••	•••	••••

•••• Ideal

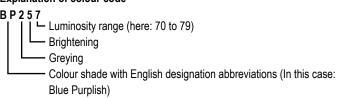
Very suitable

Suitable

#### **Knauf Farbcenter (colour center)**

The Knauf Farbcenter provides information on the feasibility and luminosity of colour shades for Knauf paints and plasters: knauf.de/farbcenter.

#### Explanation of colour code





#### **Application**

#### Primer

The finish coat surface must be primed before application of façade paint. Select a suitable primer from the product sheets for the façade paints.

#### Prevention of lime efflorescence

Casiol Grund is a ready-to-use, white pigmented, highly permeable, mineral calcium silicate primer for reducing the risk of lime efflorescence, as well as for equalising the suction properties on alkaline finishing renders before applying paint coats (medium to intensive colour shades).

In case of Casiol Grund application under the paint system with Autol TSR or Fassadol TSR, Casiol Grund may not be pigmented.

#### Paint coat

Use a trial coat to ensure the colour shade is correct. Never apply the content from different buckets together on a common wall. Mix the contents together in a clean bucket beforehand. Stir the contents of the bucket thoroughly.

The application consistence can be modified in acc. with the product data sheet.

Apply a thin and even paint coat crosswise without joints on the fully hardened and dried finish coat.

Always complete surfaces that can be viewed together on the same day.

#### ► Please note the

- "Guideline on inspection obligations upon delivery of ceramic / pottery goods within the scope of the duty to inspect and give notice of defects (§ 377 HGB)" (German only)
- VDPM Code of Practice "Egalisationsanstriche auf Edelputzen Farbtonegalisierende Beschichtung Equalization coats on finishing plasters"
- Code of Practice no. 26 "Farbveränderungen von Beschichtungen im Außenbereich - Colour changes in exterior coatings" of the Bundesausschuss Farbe und Sachwertschutz (Federal Paint and Property Protection Committee).

#### **Maintenance**

### Inspecting the façade I Tips and care instructions



#### **Maintenance**

Maintenance of the façade surface should be performed at regular intervals taking the size, architecture and location into consideration.

Maintenance is understood to mean cleaning, painting or, if required, renewing of connections (maintenance joints) on the intact External Thermal Insulation Composite Systems (ETICS). It is necessary to undertake corrective measures as quickly as possible if a maintenance issue is identified in order to assure the ETICS service life and protect the visual appearance. We generally recommend consulting experienced and qualified specialist companies if a maintenance issue is identified.

#### Plaster surfaces

Perform an inspection of the plaster surfaces on the basis of the DIN 18550-1 standard. In every case, the driving-rain proof protection of the exterior wall and the permanent weather resistance of the overall system must be assured.

#### Inspection of the façade

•	
Inspect for	Technical instructions and measures
Soiling	Clean using a high-pressure water jet (water temperature below +60 °C, observe the regional wastewater discharge regulations) and if required, apply a new coat of paint to the façade with a system-conform paint once sufficiently dry.
Microbiological growth (e.g. algae, mould)	Clean using a high-pressure water jet (water temperature below +60 °C, observe the regional wastewater discharge regulations) and apply a new coat of paint to the façade with a system-conform paint once sufficiently dry.
Sealing of elastic connections (windows, doors, expansion joints, façade penetrations)	Joints applied with permanently-elastic materials are maintenance joints and should be inspected and replaced at regular intervals, if required, or sealed to repel moisture.
Mechanical damage	Fill with equivalent insulation materials, reapply the render including the reinforcement mesh, and if necessary, apply a new coat of paint with a system-conform paint. Repairs to small areas and spots may stand out visually from the rest of the surface. Differences in texture and colour of the finishing coat may be visible.

#### Further tips and care instructions for avoidance of surface growth and fouling

Also to be observed	Technical instructions and measures
Cleaning	Dirt deposits on horizontal surfaces (e.g. window sills, top surfaces of parapets, projecting components) must be cleaned frequently.
Plants	Do not allow them directly on the façade. Cut back branches regularly (no contact with the façade)
Rainwater drainage	Gutters, window sills, wall coverings, entry shafts, floor drains and dirt filters on outlet pipes must be cleaned regularly. Ensure sufficient water draining slopes with paved surfaces, terraces, etc.
Exterior cellar entrances, splash water exposed plinth surfaces, etc.	Regular cleaning. If required, remove partially occurring fouling with water and a soft brush.
Building connections	Regular inspection (e.g. plinth areas, terraces, balconies, metal flashing, cornices and fascias).
Ventilation	Regular surge ventilation instead of ventialtion with tilted windows (no condensation due to moist room air in the façade surface)
Winter snow removal	Do not allow snow to collect against the façade (damage due to de-icing salt)

Generally, care / inspection is only required every one or two years. A shorter interval for care may be recommendable for exposed or non-protected constructional components.

Consider constructional measures during building and refurbishment to reduce the occurrence of microbiological growth and fouling, e.g.

- Measures to drain water away from the façade
- Sufficiently large roof overhangs
- Functional horizontal coverings
- Sufficiently projecting drip edges
- When possible no projections and horizontal/inclined façade surfaces
- Splash protection around the building

Note



#### Notes on the document

Knauf technical brochures are information documents on special topics as well as on the specialist competence from Knauf. The contained information and specifications, constructions, details and stated products are based, unless otherwise stated, on the certificates of usability (e.g. National Technical Test Certificate (abP)), generally applicable standards and guidelines valid at the date they are published. Furthermore, general design and structural requirements and those regarding building physics are mentioned.

#### References to other documents

#### System data sheets

- ETICS Systems with Polystyrene Insulation Materials
  - Knauf WARM WALL Basis EPS in Solid Construction WE111.de
  - Knauf WARM WALL Basis EPS in Timber Construction WE201.de
  - On old ETICS or Wood Wool Lightweight Boards
     Knauf WARM WALL Basis EPS in Solid Construction WE111-E01.de
- ETICS with Mineral Wool Insulation Materials
  - Knauf WARM WALL Plus MW in Solid Constructions WE112.de
  - Knauf WARM WALL Plus MW in Timber Construction WE202.de
  - On old ETICS or Wood Wool Lightweight Boards
     Knauf WARM WALL Plus MW in Solid Construction P323-E01.de
- ETICS with Mineral Wool and Polystyrene Insulation with Rigid Cladding Knauf WARM WALL Ceramic and Natural Stone in Solid Construction WE101e.de
- ETICS with Phenolic Resin Rigid Foam Insulation MaterialsKnauf WARM WALL PF Slim in Solid Construction P327.de
- ETICS with Polyurethane Hard Foam Insulation Knauf WARM WALL Slim PU in Solid Construction P328.de
- ETICS Systems with Wood Fibre Insulation Panels
  - Knauf WARM WALL Natur D in Timber Construction WE203D.de
  - Knauf WARM WALL Natur S in Timber Construction WE203S.de
  - Knauf WARM WALL Natur T in Timber Construction WE203T.de

#### **Product data sheets**

■ Observe the product data sheets of the Knauf system components.

#### Intended use of Knauf Systems

Please observe the following:

Caution

Knauf systems may only be used for the application cases as stated in the Knauf documentation. In case third-party products or components are used, they must be recommended or approved by Knauf. Flawless application of products / systems assumes proper transport, storage, assembly, installation and maintenance.

#### **General notes on Knauf systems**

Special care must be taken, particularly with the driving-rain application for the connections.

A handover certificate for transferring the site to another trade is recommended.

#### **Explanation of terms**

In this technical brochure, the following terms that diverge from the system and insulation material approvals are used:

■ Finish coat with paint coat instead of a final coating

#### Abbreviations used in the document:

- EPS: Expanded polystyrene
- MW: Mineral wool
- Plaster and Façade: Phenolic resin rigid foam
- PU: Polyurethane hard foam
- VDPM: Verband für Dämmsysteme, Putz und Mörtel e. V. Federation for Insulation Systems, Plaster and Mortar
- ETICS: External Thermal Insulation Composite System
- WF: Wood fibre insulation



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Web or App - Technical documentation, calculation tools, interactive animations, and lots more are available around the clock and free-of-charge from the digital world of Knauf. Clicks that are really worth it!

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- > www.knauf.de
- > www.youtube.com/knauf
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