

SOUDAFIX P300-ST

Revision: 23/06/2014

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Technical Data:

Base	Polyester			
Consistency	Stable paste			
Curing system	Chemical reaction			
Full Curing Time (20°C/65% R.H.)	<u>Temp. substrate</u>	<u>Working time</u>	<u>Dry substrate</u>	<u>Moist substrate</u>
	5°C	25 min	120 min	240 min
	10°C	15 min	80 min	160 min
	20°C	6 min	45 min	90 min
	30°C	4 min	25 min	50 min
	35°C	2 min	20 min	40 min
Specific Gravity	1,67 g/cm ³			
Temperature Resistance	-40 °C to + 80°C			
Dynamic elasticity modulus	3300 N/mm ²			
Maximum bending tensile strength	56 N/mm ²			
Maximum compression strength	108 N/mm ²			

Product:

SOUDAFIX P300-ST is a two-component anchoring resin for the pressure-free securing of anchoring rods, studs, reinforcing bars, threaded collars, profiles etc in various solid and hollow materials, such as uncracked concrete, light concrete, solid brick, hollow brick, porous concrete, natural stone, plasterboard walls, etc...

Characteristics:

- Easy to use and to apply
- Can be applied with standard caulking gun
- Fast cure
- High bending and pressure strength
- Wide application area
- Overhead application
- Cartridge re-usable by simply exchanging static mixer
- Ideal for anchoring in hollow brick in combination with sleeves
- Watertight and impermeable fixing

Application area:

Securing of standard fixings in solid and hollow building materials. Pressure free anchoring even close to edges. Can be used as repair mortar.

Packaging:

Colour: dark grey after mixing

Cartridge: 300 ml for use with standard caulking gun, 345 ml and 410 ml for use with special gun

Shelf life:

12 months in original packaging. Store at cool and dry place at temperatures between +5°C en +25°C.

Substrates:

Type: All usual porous building substrates, poor adhesion on smooth non-porous materials.

State: Clean, dry, free of dust and grease

Treatment: no particular treatment of substrate needed. In hollow materials the use of sleeves is necessary.

Remark: The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. In every case it is recommended to carry out preliminary experiments.

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Installation parameters:

Anchor diameter	d	mm	M8	M10	M12	M16	M20
Drill diameter	d_0	mm	10	12	14	18	24
Embedment depth	h_{ef}	mm	80	90	110	125	170
Edge distance	$c_{cr1,N}$	mm	80	90	110	125	170
Min. edge distance	c_{min}	mm	40	50	60	80	100
Axial distance	$s_{cr1,N}$	mm	160	180	220	250	340
Min. axial distance	s_{min}	mm	40	50	60	80	100
Min. part thickness	h_{min}	Mm	$h_{ef} + 30 \text{ mm}$			$h_{ef} + 2 d_0$	
Tightening torque	T	Nm	10	20	40	60	120

Application:

Application method: two-component gun

Application temperature: +5°C to +35°C

Clean:

Before cure: wipe off excess of product and clean afterwards with white spirit or acetone

After cure: it is recommended to let the product fully cure, so that it can easily be removed mechanically with hammer and chisel.

Repair: with the same material

Safety recommendations:

Apply the usual industrial hygiene precautions.

Only use in well ventilated spaces.

Consult the label for more information.

Remarks:

There is a risk of staining on porous substrates such as natural stone. On such substrates a preliminary compatibility test is recommended.

Instructions for use:

- Drill hole at recommended depth
- Clean drill hole with brush and air pump thoroughly
- Screw static mixer onto cartridge
- Dispense the first 10 cm of the product to waste (on piece of cardboard) until an even colour (dark grey) is achieved, and the product is well mixed
- Solid stone: fill the drill hole from bottom up.
Hollow brick: insert sleeve and fill it bottom up, so that the resin is pressed through the tiny holes of the sleeve
- Insert anchoring rod with twisting left-right motion
- Inspect the drill hole for adequate filling
- Observe hardening time. Don't move the anchoring rod during curing
- Leave the excess of product to cure as well. Remove it mechanically with hammer and chisel once cured
- Install component, applying the right torque

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Table 1: Characteristic values for tension loading in Design Method A acc. to ETAG 001								
Anchor diameter			M8	M10	M12	M16	M20	
Steel failure								
Characteristic tension resistance, Steel, property class 5.8	$N_{Rk,s}$	kN	18	29	42	78	122	
Characteristic tension resistance, Steel, property class 8.8	$N_{Rk,s}$	kN	29	46	67	125	196	
Partial safety factor	$\gamma_{Ms,N}$		1.5					
Characteristic tension resistance, Stainless steel A4 and HCR	$N_{Rk,s}$	kN	26	41	59	110	172	
Partial safety factor	$\gamma_{Ms,N}$		1.87					
Pullout and concrete cone failure ¹⁾								
Characteristic bond resistance in concrete C20/25								
Temperature range: 80°C till 50°C ²⁾	uncracked concrete	$N_{Rk,p} = N_{Rk,c}^0$	kN	11	17	24	27	46
Partial safety factor (dry and wet)	$\gamma_{Mc} = \gamma_{Mp}^1$		1.8					
Increasing factors for non-concrete concrete	ψ_c		$(f_{ck}^{0,30})/2.63$					
Splitting failure								
Edge distance	$C_{cr,sp}$	mm	$C_{cr,N} \leq 2 \cdot h_{ef} (2,5 - h/h_{ef}) \leq 2,4 \cdot h_{ef}$					
Axial distance	$S_{cr,sp}$	mm	$2 C_{cr,sp}$					
Partial safety factor (dry and wet)	γ_{Msp}		1.8 ³⁾					

¹⁾ Shall be determined acc. this table or acc. to 5.2.2.4, Annex C of ETAG001. The smaller value is decisive.

²⁾ Short term elevated temperature / Long term constant temperature

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Table 2: Characteristic values for shear loads in uncracked concrete according to ETAG 001							
Diameter threaded rod			M8	M10	M12	M16	M20
Steel failure without lever arm							
Characteristic shear resistance, steel, zinc plated or hot dip, property class 5.8	$V_{Rk,s}$	kN	9	15	21	39	61
Characteristic shear resistance, steel, zinc plated or hot dip, property class 8.8	$V_{Rk,s}$	kN	15	23	34	63	98
Partial safety factor	$\gamma_{Ms,V}^{1)}$		1.25				
Characteristic shear resistance, stainless steel A4 and HCR	$N_{Rk,s}$	kN	13	20	30	55	86
Partial safety factor	$\gamma_{Ms,V}^{1)}$		1.56				
Steel failure with lever arm							
Characteristic bending moment, steel, zinc plated or hot dip, property class 5.8	$V_{Rk,s}$	kN	19	37	65	166	324
Characteristic bending moment, steel, zinc plated or hot dip, property class 8.8	$V_{Rk,s}$	kN	30	60	105	266	519
Partial safety factor	$\gamma_{Ms,V}^{1)}$		1.25				
Characteristic bending moment, stainless steel A4 and HCR	$N_{Rk,s}$	kN	26	52	92	232	454
Partial safety factor	$\gamma_{Ms,V}$		1.56				
Concrete pryout failure							
Factor k			2.0				
Partial safety factor	γ_{Mcp}		1.5				
Concrete edge failure							
Effective length of anchor in shear loading	l_f	mm	80	90	110	125	170
Outside diameter of anchor	d_{nom}	mm	10	12	14	18	24
Partial safety factor	γ_{Mc}		1.5				

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SOUDAFIX P300-ST**Revision: 23/06/2014****Page 5 of 5****Recommended loads:**

The recommended loads are only valid for single anchor and for a roughly design, if the following conditions are valid:

dry bore hole, uncracked concrete C20/25, steel 5.8

$$C \geq C_{cr,N}$$

$$S \geq S_{cr,N}$$

$$h \geq 2 \times h_{ef}$$

If the conditions are not fulfilled the loads must be calculated according to ETAG 001 Annex C. The safety factors are already included in the recommended loads.

Anchor diameter	d	mm	M8	M10	M12	M16	M20
Embedment depth	h_{ef}	mm	80	90	110	125	170
Edge distance	$C_{cr,N}$	mm			1,5 x hef		
Axial distance	$S_{cr,N}$	mm			3,0 x hef		
Recommended tension load 50°C/80°C ²⁾	N_{Rec}	kN	4,5	6,9	9,6	10,8	18,1
Recommended shear load without lever arm for steel property class 5.8 ¹⁾	V_{Rec}	kN	5,1	8,6	12	22	34,9

¹⁾ Shear load with lever arm acc. Annex C of ETAG 001.

²⁾ Short term temperature / long term temperature.

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