SOUDAFIX P300-SF

Technical Data:

Base	Polyester, styrene free			
Consistency	Stable paste			
Curing system	Chemical reaction			
Full Curing Time (20°C/65% R.H.)	Temp. substrate	Working time	Dry substrate	Moist substrate
	-5°C	90 min	360 min	720 min
	0°C	45 min	180 min	360 min
	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	1,74 g/cm³			
Temperature Resistance	-40 °C to + 80°C			
Dynamic elasticity modulus	4.000 N/mm²			
Maximum bending tensile strength	30 N/mm²			
Maximum compression strength	75 N/mm²			

Product:
SOUDAFIX P300-SF is a two-component anchoring resin for the pressure-free securing of threaded rods (ETA: M8 - M24), studs, reinforcing bars, threaded collars, profiles etc in various solid and hollow materials, such as uncracked concrete, aerated concrete, solid or hollow brick, porous concrete, natural stone, plasterboard walls, etc…

Characeristics:
- Easy to use and to apply
- Can be applied with standard caulking gun
- Fast cure
- Styrene free (low odour)
- Wide application area even in wet boreholes
- Overhead application
- Cartridge re-usable by simply exchanging static mixer
- Ideal for anchoring in hollow brick in combination with sleeves
- Watertight and impermeable fixing
- European Technical Assessment ETA 11/0447 based on ETAG 001 Part 1 and 5 for application in uncracked concrete
- European Technical Assessment ETA 13/0064 based on ETAG 029 for application in masonry

Application area:
Securing of heavy loads in solid and hollow building materials. Pressure free anchoring even close to edges.

Packaging:
Colour: dark grey after mixing
Cartridge: 280 ml and 300 ml for use with standard caulking gun, 410 ml with special gun.

Shelf life:
18 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.

Application
Application method: two-component gun
Application temperature: -5°C to +39°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

SOUDAFIX P300-SF

Installation parameters for threaded rods in uncracked concrete:

Diameter threaded rod	**d**	**mm**	**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Drill diameter	d_0	mm	10	12	14	18	24	28
Min. anchorage depth	$h_{ef,min}$	mm	60	60	70	80	90	96
Max. anchorage depth	$h_{ef,max}$	mm	160	200	240	320	400	480
Edge distance	$c_{cr,N}$	mm	80	90	110	125	170	210
Min. edge distance	c_{min}	mm	40	50	60	80	100	120
Axial distance	$s_{cr,N}$	mm	160	180	220	250	340	420
Min. axial distance	s_{min}	mm	40	50	60	80	100	120
Min. thickness of member	h_{min}	mm	h_{ef} + 30 mm ≥100 mm			h_{ef} + 2 d_0		
Tightening torque	T_{inst}	Nm	10	20	40	60	120	160

Installation parameters for threaded rods in masonry:

Diameter threaded rod	**d**	**mm**	**M8**	**M10**	**M12**	**M16**
Drill diameter	d_0	mm	12	16	20	20
Depth sleeve	h_{nom}	mm	80	85	85	85
Anchorage depth	h_{ef}	mm	80	85	85	85
Edge distance	$c_{cr,N}$	mm	250			
Min. edge distance	c_{min}	mm	250			
Axial distance	$s_{cr,N,\ single}$	mm	250			
Tightening torque	T_{inst}	Nm	2			

SOUDAFIX P300-SF

Table C1: Characteristic values for tensile strength of threaded rods in uncracked concrete

Diameter threaded rods				**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Steel failure									
Characteristic tensile strength		N_{Rks}	kN	$A_s \times f_{uk}$					
Combined pullout and concrete cone failure									
Characteristic tensile strength in uncracked concrete C20/25									
Temperature range I: 40°C / 24°C	Dry and wet concrete	$\tau_{Rk,unr}$	N/mm²	8,5	8,0	8,0	8,0	8,0	8,0
	Flooded bore hole	$\tau_{Rk,unr}$	N/mm²	8,5	8,0	8,0	8,0	8,0	8,0
Temperature range II: 80°C / 50°C	Dry and wet concrete	$\tau_{Rk,unr}$	N/mm²	6,5	6,0	6,0	6,0	6,0	6,0
	Flooded bore hole	$\tau_{Rk,unr}$	N/mm²	6,5	6,0	6,0	6,0	6,0	6,0
Increasing factors for uncracked concrete Ψc		C25/30		1,04					
		C30/37		1,08					
		C35/45		1,13					
		C40/50		1,15					
		C45/55		1,17					
		C50/60		1,19					
Factor according CEN/TS 1992-4-5 Section 6.2.2.3		k_8	-	10,1					
Concrete cone failure									
Factor according CEN/TS 1992-4-5 Section 6.2.3.1		k_{ucr}	-	10,1					
Edge distance		$c_{cr,N}$	mm	1,5 h_{ef}					
Spacing		$s_{cr,N}$	mm	3,0 h_{ef}					
Splitting failure									
Edge distance		$c_{cr,sp}$	mm	$1{,}0 \cdot h_{ef} \leq 2 \cdot h_{ef} (2{,}5 - h/h_{ef}) \leq 2{,}4 \cdot h_{ef}$					
Spacing		$s_{cr,sp}$	mm	2 $c_{cr,sp}$					
Installation safety factor (dry and wet concrete)		$\gamma_2 = \gamma_{inst}$		1,2					
Installation safety factor (flooded bore hole)		$\gamma_2 = \gamma_{inst}$		1,2					

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SOUDAFIX P300-SF

Table C2: Characteristic values for shear loads in uncracked concrete								
Diameter threaded rod			**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Steel failure without lever arm								
Characteristic values for shear loads	$V_{Rk,s}$	kN	$0{,}5 \times A_s \times f_{uk}$					
Ductility factor according CEN / TS 1992-4-5 Section 6.3.2.1	k_2	-	0,8					
Steel failure with lever arm								
Characteristic bending moment	$M^0_{Rk,s}$	Nm	$1{,}2 \times W_{el} \times f_{uk}$					
Concrete pryout failure								
Factor k_3 in equation (27) of CEN/TS 1992-4-5 Section 6.3.3 Factor k in equation (5.7) of TR029	$k_{(3)}$	-	2.0					
Installation safety factor	$\gamma_2 = \gamma_{inst}$	-	1,0					
Concrete edge failure								
Effective anchor length	l_f	mm	$l_f = \min(h_{ef}; 8\ d_{nom})$					
Outside diameter of anchor	d_{nom}	mm	8	10	12	16	20	24
Installation safety factor	$\gamma_2 = \gamma_{inst}$	-	1,0					

SOUDAFIX P300-SF

Table C3: Characteristic tensile and shear strengths of threaded rods in masonry					
Hollow clay brick, Compressive strength ≥ 6 N/mm²			**Characteristic strength[1]**		
			40°C/24°C	**80°C/50°C**	**All temperatures**
Sleeve	Diameter threaded rod	Anchor depth h_{ef} (mm)	Tensile N_{Rk} (kN)[2])	Tensil N_{Rk} (kN)[2])	Shear V_{rk}(kN)[3])
SH 12x80	M8	80	Ca. 0,5 - 0,75	Ca. 0,3 - 0,5	Ca. 2,0 - 2,5
SH 16x85	M10	85	Ca. 1,2 - 1,5	Ca. 0,75 - 1,2	Ca. 2,0 - 4,0
SH 20x85	M12 / M16	85	Ca. 1,2 - 2,0	Ca. 0,75 - 1,5	Ca. 3,0 - 4,0
Hollow clay brick, Compressive strength ≥ 10 N/mm²			**Characteristic strength[1]**		
			40°C/24°C	**80°C/50°C**	**All temperatures**
Sleeve	Diameter threaded rod	Anchor depth h_{ef} (mm)	Tensile N_{Rk} (kN)[2])	Tensile N_{Rk} (kN)[2])	Shear V_{rk}(kN)[3])
SH 12x80	M8	80	Ca. 1,2 - 2,0	Ca. 0,9 - 1,5	Ca. 3,0
SH 16x85	M10	85	Ca. 1,5 - 2,0	Ca. 0,9 - 1,5	Ca. 3,0 - 3,5
SH 20x85	M12 / M16	85	Ca. 1,5 - 2,0	Ca. 0,9 - 1,5	Ca. 3,5 - 4,0

[1)] Details per brick type see ETA 13/0064

[2)] For design according ETAG 029, Annex C: $N_{Rk} = N_{Rk,p} = N_{Rk,b}$; $N_{Rk,s}$ according Table C2 Annex C2; Calculation $N_{Rk,pb}$ see ETAG 029, Annex C

[3)] For $V_{Rk,s}$ see Annex C 2, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ see ETAG 029, Annex C

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