SOUDAL

Technical Data Sheet

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.

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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

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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			

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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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		$N_{Rk,s}$	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	$1,0\ .\ h_{ef} \leq 2\ .\ h_{ef}\ (2,5 - h/h_{ef}) \leq 2,4\ .\ h_{ef}$					
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					

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					

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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