SOUDAL

Technical Data Sheet

SOUDAFIX EA350-ST

Technical Data:

Base	Epoxyacrylate			
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	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	1,66 g/cm³			
Temperature Resistance	-40 °C to + 80°C			
Dynamic elasticity modulus	3300 N/mm²			
Maximum bending tensile strength	56 N/mm²			
Maximum compression strength	108 N/mm²			

Product:
SOUDAFIX EA350-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…

Characeristics:
- Easy to use and to apply
- 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
- Reduced chemical resistance

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: 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.

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Installation parameters:

Anchor diameter	d	mm	M8	M10	M12	M16	M20	M24
Drill diameter	d_0	mm	10	12	14	18	24	28
Embedment depth	h_{ef}	mm	80	90	110	125	170	210
Edge distance	$c_{cr1,N}$	mm	80	90	110	125	170	210
Min. edge distance	c_{min}	mm	40	50	60	80	100	120
Axial distance	$s_{cr1,N}$	mm	160	180	220	250	340	420
Min. axial distance	s_{min}	mm	40	50	60	80	100	120
Min. part thickness	h_{min}	Mm	h_{ef} + 30 mm			h_{ef} + 2 d_0		
Tightening torque	T	Nm	10	20	40	60	120	150

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**	**M24**
Steel failure									
Characteristic tension resistance, steel, zinc plated or hot dip, property class 5.8		$N_{Rk,s}$	kN	18	29	42	78	122	177
Characteristic tension resistance, steel, zinc plated or hot dip, property class 8.8		$N_{Rk,s}$	kN	29	46	67	125	196	282
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	247
Partial safety factor		$\gamma_{Ms,N}$		1.87					
Pullout and concrete cone failure [1]									
Characteristic bond resistance in concrete C20/25									
Temperature range: 40°C till 24°C [2]	uncracked concrete	$N_{Rk,p} = N^0_{Rk,c}$	kN	20	35	35	60	75	115
Temperature range: 80°C till 50°C [2]		$N_{Rk,p} = N^0_{Rk,c}$	kN	9	14	20	23	38	55
Partial safety factor (dry and wet)		$\gamma_{Mc} = \gamma_{Mp}$ [1]		1.5					
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}		1.5					

[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**	**M24**
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	88
Characteristic shear resistance, steel, zinc plated or hot dip, property class 8.8	$V_{Rk,s}$	kN	15	23	34	63	98	141
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	124
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	560
Characteristic bending moment, steel, zinc plated or hot dip, property class 8.8	$V_{Rk,s}$	kN	30	60	105	266	519	896
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	784
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	lf	mm	80	90	110	125	170	210
Outside diameter of anchor	dnom	mm	10	12	14	18	24	28
Partial safety factor	γ_{Mc}		1.5					

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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**	**M24**
Embedment depth	h_{ef}	mm	80	90	110	125	170	210
Edge distance	$c_{cr,N}$	mm	1,5 x hef					
Axial distance	$s_{cr,N}$	mm	3,0 x hef					
Recommended tension load 24°C/40°C [2)]	N_{Rec}	kN	8,6	13,8	16,7	28,6	35,7	54,8
Recommended tension load 50°C/80°C [2)]	N_{Rec}	kN	4,3	6,7	9,5	11	18,1	26,2
Recommended shear load without leaver arm for steel property class 5.8 [1)]	V_{Rec}	kN	5,1	8,6	12	22	34,9	50,3

[1)] Shear load with leaver arm acc. Annex C of ETAG 001.

[2)] Short term temperature / long term temperature.