DECLARACIÓN DE PRESTACIONES

PLACOTHERM® FIJACIÓN TACO NYLON

DdP 2-001-100305-2022/01
20240523

1. **Identificación de productos:**

   Placotherm® fijación taco nylon
   (033 EJOT / SORMAT SDF 10V y EJOT / SORMAT SDF 10H)

2. **Uso previsto del producto:**

   Anclaje de plástico para sistemas no estructurales redundantes en hormigón y mampostería

3. **Fabricante:**

   Saint-Gobain Placo Ibérica, S.A.
   Príncipe de Vergara, 132. 28002. Madrid.
   www.placo.es

4. **Sistema de evaluación y verificación de la constancia de las prestaciones:**

   Sistema 2+

5. **Organismo notificado:**

   0672 - MPA - Materialprüfanstalt Universität Stuttgart
   Organismo evaluador : DIBt - Deutsches Institut für Bautechnik, Berlin
   Evaluación Técnica Europea: **ETA-10/0305**

6. Prestaciones declaradas

a) Resistencia mecánica y estabilidad (BWR 1) y seguridad y accesibilidad (BWR 4)	
Resistencia a la rotura del acero bajo carga de tracción	*Véase el anexo C 1*
Resistencia a la fractura del acero bajo carga de corte.	*Véase el anexo C 1*
Resistencia al arrancamiento o al fallo del hormigón bajo carga de tracción (material base grupo a)	*Ver Anexo C 2.*
Resistencia en cualquier dirección de carga sin brazo de palanca (material base grupo b, c, d)	*Véanse los anexos C 3 - C 6*
Distancia y separación entre cantos (material base grupo a)	*Véase el anexo B 3*
Distancia y separación entre cantos (grupo de materiales base b, c, d)	*Véanse los anexos B 4 y B 5*
Desplazamientos bajo carga a corto y largo plazo	*Ver Anexo C 2.*
Durabilidad	*Véase el anexo B 1*
b) Seguridad en caso de incendio (BWR 2)	
Reacción al fuego	*Los anclajes satisfacen los requisitos para la Clase A 1*
Resistencia al fuego	*Ver Anexo C 2.*

Esta declaración de prestaciones está definida bajo total responsabilidad de la empresa fabricante identificada en el punto 3.

Firmado por y en nombre del fabricante por:

En Madrid, 23/05/2024
Esther Soriano Hoyuelos
Directora de Marketing

Saint-Goba SAINT-GOBAIN **, S.A.**
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Table C1.1: Characteristic bending moment of the screw (base material group a, b, c and d)

Anchor type	SDF-10V				SDF-10H	
Material	Steel, galvanized		Stainless steel		Steel, galvanized	Stainless steel
Characteristic bending moment $M_{Rk,s}$ [Nm]	13,80[2)]	23,01[3)]	16,09[2)]	26,62[3)]	17,67	20,62
Partial safety factor γ_{Ms} [1)]	*1,25*		*1,56*		*1,25*	*1,56*

1) in absence of other national regulations
2) at $h_{nom,1}$
3) at $h_{nom,2}$

Table C1.2: Characteristic resistance of the screw (base material group a, b, c and d)

Anchor type	SDF-10V				SDF-10H	
Material	Steel, galvanized		Stainless steel		Steel, galvanized	Stainless steel
Characteristic tension resistance $N_{Rk,s}$ [kN]	15,85		18,49		18,70	21,82
Partial safety factor γ_{Ms} [1)]	*1,5*		*1,87*		*1,5*	*1,87*
Characteristic shear resistance $V_{Rk,s}$ [kN]	7,93[2)]	11,09[3)]	9,12[2)]	12,94[3)]	9,35	10,91
Partial safety factor γ_{Ms} [1)]	*1,25*		*1,56*		*1,25*	*1,56*

1) in absence of other national regulations
2) at $h_{nom,1}$
3) at $h_{nom,2}$

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex C 1
Performance Characteristic resistance of the screw	

Table C2.1: Displacements [1)2)] under tension and shear loads (base material group a, b, c and d)

Anchor type		Displacements under tension			Displacements under shear		
		F = N [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	F = V [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Concrete, solid and hollow or perforated masonry							
SDF-10V		1,8	0,36	0,72	1,8	0,41	0,82
SDF-10H		1,8	0,37	0,74	1,8	0,41	0,82
Autoclaved aerated concrete							
SDF-10H	$f_{ck} \geq 4$ N/mm²	0,54	0,17	0,34	0,54	1,08	1,62
	$f_{ck} \geq 6$ N/mm²	0,89	0,41	0,82	0,89	1,78	2,67

1) Valid for all temperature ranges
2) Intermediate values by linear interpolation

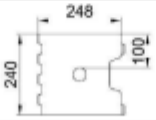
Table C2.2: Characteristic resistance for pull-out failure, use in concrete

Pull-out failure	SDF-10V		SDF-10H	
Overall plastic anchor embedment depth $h_{nom,1}$ [mm]	**40**		**70**	
Temperature range	30/50 °C	50/80 °C	30/50 °C	50/80 °C
Concrete ≥ C12/15 Standard concrete slabs				
Characteristic tension resistance $N_{Rk,p}$ [kN]	**4,5**	**4,0**	**4,5**	**4,0**
Partial safety factor γ_{Mc} [1)]	*1,8*			
Concrete ≥ C12/15 thin concrete slabs (h= 50mm bis 100 mm)				
Overall plastic anchor embedment depth $h_{nom,1}$ [mm]	----		**70**	
Temperature range			30/50 °C	50/80 °C
Characteristic tension resistance $N_{Rk,p}$ [kN]			**3,0**	**3,0**
Partial safety factor γ_{Mc} [1)]			*1,8*	
Values under fire exposure in concrete C20/25 to C50/60 in any load direction, no permanent centric tension load and without lever arm, fastening of facade systems (Fire resistance class R 90)				
Characteristic tension resistance $F_{Rk,fi,90}$ [kN]	**≤ 0,8**		**≤ 0,8**	
Partial safety factor $\gamma_{M,fi}$ [1)]	*1,0*		*1,0*	

1) in the absence of other national regulations

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex C 2
Performances Displacements under tension and shear loads, Characteristic resistance in concrete and thin concrete slabs, values under fire exposure	

Table C3.1: SDF-10V Characteristic resistance F_{Rk}[1] in solid masonry (base material group b) with $h_{nom,2} \geq 50$ mm

Base material, min DF and min. size (LxWxH) [mm]	Geometry of the brick	Minimum compressive strength f_b [N/mm²]	Bulk density ρ [kg/dm³]	F_{Rk}[1] [kN] 30°C – 50°C	F_{Rk}[1] [kN] 50°C – 80°C
Solid masonry					
Clay brick Mz EN 771-1:2011+ A1:2015 e.g. Schlagmann, MZ Format: 2 DF (240x115x113)	-	20	≥ 1,8	**2,5**	**2,5**
		10		**2,0**	**1,5**
Sand-lime solid brick, KS EN 771-2:2011+ A1:2015 e.g. Unika Format: NF(240x115x71)	-	36	≥ 2,0	**4,0**	**4,0**
		20		**2,0**	**2,0**
		10		**1,5**	**1,5**
Sand-lime solid brick, KS EN 771-2:2011+ A1:2015 e.g. Unika Format: 8DF (248x240x238)		20	≥ 1,8	**4,5**	**4,5**
		10		**3,0**	**3,0**
Lightweight concrete solid brick, V EN 771-3:2011+ A1:2015 e.g. Fa. Nütling, Liapor V6 Format: 2 DF (240x115x113)	-	6	≥ 1,2	**0,3**	**0,3**
Partial safety factor γ_{Mm}[2]				*2,5*	

[1] Characteristic resistance F_{Rk} for tension, shear or combined tension and shear loading. The characteristic resistance is valid for single anchors or for a group of two or four anchors with a spacing equal or larger than the minimum spacing s_{min} according to Table B4.1
Drilling method = Hammer drilling

[2] In the absence of other national regulations

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex C 3
Performances Characteristic resistance in solid masonry (SDF-10V)	

Table C6.1: SDF-10H Characteristic resistance F_{Rk}[1] in autoclaved aerated concrete (base material group d)

	Minimum compressive strength f_{ck} [N/mm²]	Bulk density ρ [kg/m³]	F_{Rk}[1] [kN]	F_{Rk}[1] [kN]
			30°C – 50°C	50°C – 80°C
uncracked autoclaved aerated concrete (blocks) in accordance with EN 771-4:2011 +A1:2015	4	≥ 500	1,5	1,5
	5	≥ 500	2,0	2,0
	6	≥ 650	2,5	2,0
	7	≥ 650	2,5[3]	2,0[3]
Partial safety factor γ_{MAAC}[2]			*2,0*	

1) Characteristic resistance for tension, shear or combined tension and shear loading.
Drilling method = rotary drilling
2) In the absence of other national regulations
3) Values limited by the characteristic resistance in autoclaved aerated concrete with f_{ck} = 6 N/mm²

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	**Annex C 6**
Performances Characteristic resistance in autoclaved aerated concrete (SDF-10H)	

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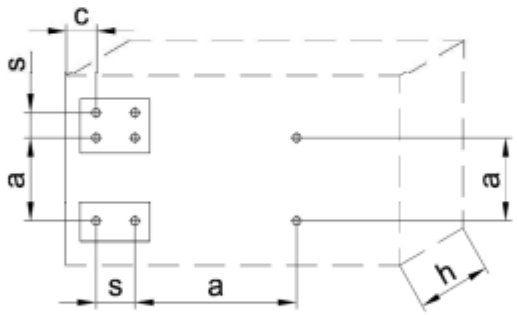
Table B3.1: Minimum member thickness, spacing and edge distance in concrete (base material group a)

Anchor type		Minimum member thickness h_{min} [mm]	Characteristic edge distance $c_{cr,N}$ [mm]	Minimum spacing and edge distances [mm]
SDF-10V	concrete ≥ C16/20	100	80	s_{min} = 60 for c_{min} ≥ 50
	concrete C12/15		110	s_{min} = 85 for c_{min} ≥ 70
SDF-10H	concrete ≥ C 16/20		80	s_{min} = 60 for c_{min} ≥ 50
	concrete C 12/15		110	s_{min} = 85 for c_{min} ≥ 70
	concrete C20/25 (thin concrete slabs)	50	160	s_{min} = 80 for c_{min} ≥ 160

Fixing points with a spacing a ≤ s_{cr} (with s_{cr} = 80 mm) are considered as a group with a maximum characteristic resistance $N_{Rk,p}$ according to Table C2.2. For spacing a > s_{cr} the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,p}$ acc. to Table C2.2.

Scheme of spacing and edge distances in concrete



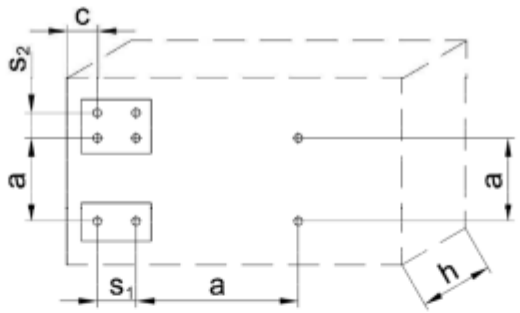
h = member thickness
c = edge distance
a = spacing
s_{min} = spacing within anchor group

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex B 3
Intended use Minimum member thickness, spacing and edge distance in concrete	

Table B4.1: Minimum member thickness, spacing and edge distance in masonry (base material group b and c)

Anchor type		SDF-10V	SDF-10H
Minimum member thickness	h_{min} [mm]	100	100
Single anchor			
Minimum edge distance	c_{min} [mm]	100	100
Minimum spacing	a_{min} [mm]	250	250
Anchor group			
Minimum edge distance	c_{min} [mm]	100	
Minimum spacing perpendicular to free edge	$s_{1,min}$ [mm]	100	
Minimum spacing parallel to free edge	$s_{2,min}$ [mm]	100	

Scheme of spacing and edge distances in masonry



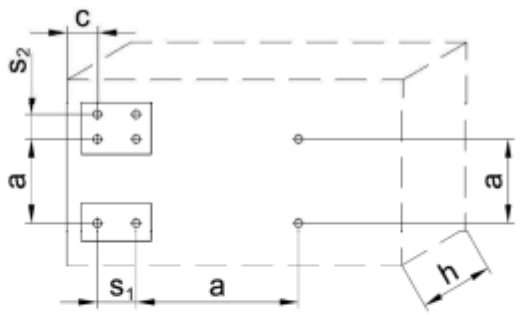
h = member thickness
a = spacing
c = edge distance
s_1 = spacing (perpendicular to the free edge) within an anchor group
s_2 = spacing (parallel to the free edge) within an anchor group

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex B 4
Intended use Minimum member thickness, spacing and edge distance in masonry	

Table B5.1: Minimum member thickness, spacing and edge distance in autoclaved aerated concrete (base material group d)

SDF -10H		$f_{ck} \geq 4$ N/mm²	$f_{ck} \geq 6$ N/mm²
Single anchor			
Minimum member thickness	h_{min} [mm]	100	140
Minimum edge distance	c_{min} [mm]	100	
Minimum spacing	a_{min} [mm]	250	
Anchor group			
Minimum member thickness	h_{min} [mm]	140	
Minimum edge distance	$c_{1,min}$ [mm]	100	
Minimum edge distance (perpendicular to $c_{1,min}$)	$c_{2,min}$ [mm]	150	
Minimum spacing perpendicular to free edge	$s_{1,min}$ [mm]	80	
Minimum spacing parallel to free edge	$s_{2,min}$ [mm]	80	

Scheme of spacing and edge distances in autoclaved aerated concrete



h = member thickness
a = spacing
c = edge distance
s_1 = spacing (perpendicular to the free edge) within an anchor group
s_2 = spacing (parallel to the free edge) within an anchor group

EJOT / SORMAT SDF 10V und EJOT / SORMAT SDF 10H	Annex B 5
Intended use Minimum member thickness, spacing and edge distance in autoclaved aerated concrete	