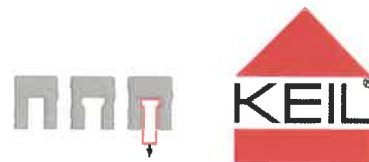




Declaration of Performance

DoP Nr. 0793-CPR-8.1-28



1. Unique Identification code of the product-type: **Mirage KEIL undercut anchor KH**
2. Type number: **KH 5,5; KH 7; KH 8,5**
3. Intended use or uses of the construction product: **Fasteners for rear fixing of facade panels made of ceramic plates (stoneware) in accordance with EN 14411:2012**
4. Manufacturer: **Mirage Granito Ceramico Spa, Via Giardini nord 225, 41026 Pavullo, ITALY**
5. Authorised representative: -
6. System or systems of assessment and verification of constancy of performance: **System 2+**
7. Harmonised Standard: -
8. European evaluation document: **EAD 330030-00-0601, Edition 10/2018**
European Technical Assessment: **ETA-20/0589**
Technical Assessment Body: **DIBt**
Notified Body: **0793 – Güteschutz Beton**

9. Declared Performance:

Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic resistance to breakout or pull-out failure under tension load	See Annex C 1
Characteristic resistance to breakout or pull-out failure under shear load	See Annex C 1
Characteristic resistance to breakout or pull-out failure under combined tension and shear load	See Annex C 1
Edge distance and spacing	See Annex C 1
Durability	Corrosion Resistance Class (CRC) III in accordance with EN 1993-1-4:2015
Characteristic resistance to steel failure under tension and shear loads	See Annex C 1

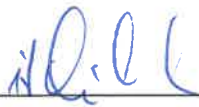
Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:



Gerda Söhngen
Managing Director
Engelskirchen, 09.10.2020



Dipl.-Ing. Georg Miebach
Product Manager

Table C1: Characteristic values for the design of the anchor

Embedment depth	$h_s =$	[mm]	5,5	7,0	8,5	
Panel thickness	$h \geq$	[mm]	8,0	9,5	11,0	
Characteristic resistance to tension load	Class A	$N_{Rk} =$	[kN]	1,0	1,5	2,7
	Class B			1,1	1,6	2,8
	Class C			1,2	1,7	3,0
characteristic resistance to shear load	Class A	$V_{Rk} =$	[kN]	2,0	2,2	2,4
	Class B			2,1	2,3	2,5
	Class C			2,2	2,4	2,6
edge distance ¹⁾	$a_r \geq$	[mm]	100			
spacing	$a \geq$	[mm]	200			
charakt. resistance steel failure	tension load	$N_{Rk,s} =$	[kN]	14,1		
	shear load	$V_{Rk,s} =$	[kN]	7,0		
Value for tri-linear function with combined tension and shear load	$X =$	[-]	1,0			

¹⁾ The edge distance may be reduced to 50 mm. For edge distances $50 \text{ mm} \leq a_r \leq 100 \text{ mm}$ the characteristic values of resistance for shear loads shall be reduced by the factor $a_r/100$ [a_r in mm]; in case of different edge distances the smaller value is decisive

Mirage KEIL undercut anchor KH

Performance
Characteristic values for the design of the anchor

Annex C 1