



LEISTUNGSERKLÄRUNG

DoP Nr. KEW - 1404-CPR-0TBA-M - de

1. Eindeutiger Kenncode des Produkttyps: Verbundmörtel VM EP

2. Typen-, Chargen- oder Seriennummer oder ein anderes Kennzeichen zur Identifikation des Bauprodukts gemäß Artikel 11 Absatz 4:

ETA-22/0381 Anhang A1
Chargennummer: siehe Verpackung

3. Vom Hersteller vorgesehener Verwendungszweck oder vorgesehene Verwendungszwecke des Bauprodukts gemäß der anwendbaren harmonisierten technischen Spezifikation:

Produkttyp	Produktgruppe: 33 Chemische Injektionsdübel
Für die Verwendung in	ETA-22/0381 Anhang B1
Option	ETA-22/0381 Anhang B1
Belastung	ETA-22/0381 Anhang B1
Material	ETA-22/0381 Anhang A4
Temperaturbereich (gegebenfalls)	ETA-22/0381 Anhang B1

4. Name, eingetragener Handelsname oder eingetragene Marke und Kontaktanschrift des Herstellers gemäß Artikel 11 Absatz 5:

Chemfix Products Ltd
Mill Street East
Dewsbury WF12 9BQ West Yorkshire
England

5. Gegebenenfalls Name und Kontaktanschrift des Bevollmächtigten, der mit den Aufgaben gemäß Artikel 12 Absatz 2 beauftragt ist:

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6. System oder Systeme zur Bewertung und Überprüfung der Leistungsbeständigkeit des Bauprodukts gemäß Anhang V:

System 1

7. Im Falle der Leistungserklärung, die ein Bauprodukt betrifft, das von einer harmonisierten Norm erfasst wird:

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8. Im Falle der Leistungserklärung, die ein Bauprodukt betrifft, für das eine Europäische Technische Bewertung ausgestellt worden ist:

ETA-Danmark

hat folgendes ausgestellt:

ETA-22/0381

vom

24.08.2023

auf der Grundlage von

EAD 330076-00-0604

Die notifizierte Produktzertifizierungsstelle
vorgenommen:

1404-CPR

hat nach dem

System 1

- i) Erstprüfung des Produktes
- ii) Erstinspektion des Werkes und der werkseigenen Produktionskontrolle
- iii) laufende Überwachung, Beurteilung und Anerkennung der werkseigenen Produktionskontrolle

und Folgendes ausgestellt:

1404-CPR-0TBA-M

9. Erklärte Leistung:

Wesentliche Merkmale	Bemessungsmethode	Leistung		Harmonisierte technische Spezifikation
		Stahl, verzinkt	Nichtrostender Stahl A4	
Charakteristische Zugbeanspruchung	EAD 330076-00-0604	ETA-22/0381 Anhang C1	ETA-22/0381 Anhang C1	EAD 330076-00-0604
Verschiebung unter Zugbeanspruchung	EAD 330076-00-0604	ETA-22/0381 Anhang C2	ETA-22/0381 Anhang C2	
Charakteristische Werte unter Querbeanspruchung	EAD 330076-00-0604	ETA-22/0381 Anhang C1	ETA-22/0381 Anhang C1	
Verschiebung unter Querbeanspruchung	EAD 330076-00-0604	ETA-22/0381 Anhang C2	ETA-22/0381 Anhang C2	
Temperaturen	EAD 330076-00-0604	ETA-22/0381 Anhang B1	ETA-22/0381 Anhang B1	

Wenn gemäß den Artikeln 37 oder 38 die Spezifische Technische Dokumentation verwendet wurde, die Anforderungen, die das Produkt erfüllt:

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10. Die Leistung des Produkts gemäß den Nummern 1 und 2 entspricht der erklärten Leistung nach Nummer 9.

Verantwortlich für die Erstellung dieser Leistungserklärung ist allein der Hersteller gemäß Nummer

4. Unterzeichnet für den Hersteller und im Namen des Herstellers von:

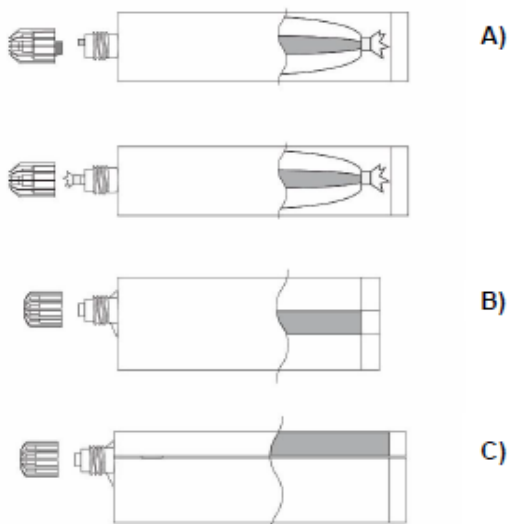

André Gedan
 (Geschäftsführer Vertrieb und Marketing)
 Wilthen, 07.01.2025



Cartridge: Chemfix CH+ MAX

- A) Foil Bag Cartridge 165ml, 300ml. (ChubSeal® & Chubpack™)
- B) Coaxial Cartridge 380ml / 400 ml / 410 ml / 420ml
- C) Side by Side Cartridge 345ml, 825ml

Cartridge Print : Chemfix CH+ MAX
Including - Installation procedure,
Production Batch code, Expiry Date,
Storage conditions, Health & Safety
warning, Gel & Cure time according to
temperatures.

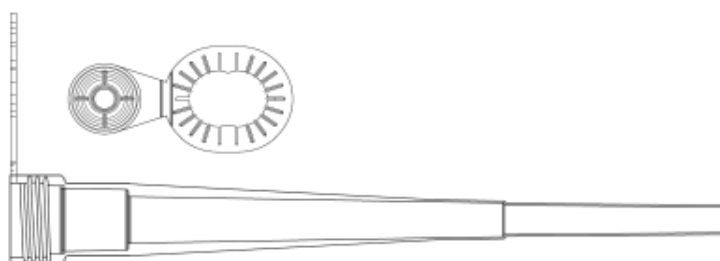


Marking:

CH+ MAX

Batch code, either expiry date or manufacturing date with shelf life

T-Flow™ Mixer with hanger



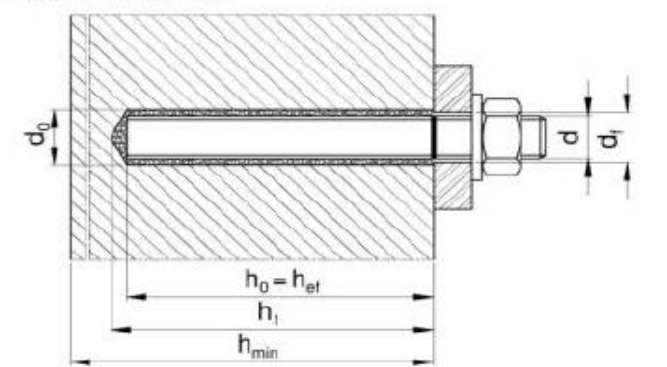
T-Flow™ Mixer



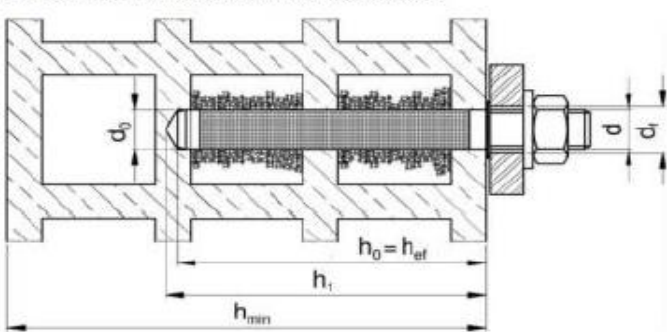
CHEMFIX CH+ MAX	Annex A1
Product and intended use	

Anchor application in solid masonry (brick n°1) and autoclaved aerated concrete (brick n°3) according to Annex B9) and in hollow/perforated masonry with nylon sleeve (brick n°2 according to Annex B9)

Anchor application in solid masonry



Anchor application in hollow/perforated masonry with nylon sleeve



- d = diameter of the threaded rod
- d0 = diameter of drill bit
- d1 = diameter of clearance hole in the fixture
- hef = effective anchorage depth
- hmin = minimum thickness of the base material
- h1 = depth of drilled hole to deepest point

CHEMFIX CH+ MAX	Annex A2
Product and intended use (2)	

Injection Mortar : Chemfix CH+ MAX – Resin System

Plastic sleeve for hollow/perforated masonry: nominal dimensions and material

Resin sleeves are the effective way to create a fixing where there is a hollow void, such as for perforated bricks and blocks, or a more porous material for example blockwork. Resin is injected to fill the volume of the sleeve, and then forced through the fine perforations once the metal fixing rod is inserted. This distributes the resin material into the fixing cavity, forming a solid joint between the resin, the sleeve and the fixing.



65565 - Nylon Perforated Sleeve – 16 x 85

Nominal Diameter 16mm

Nominal Length 85mm



65580 - Nylon Perforated Sleeve – 12 x 80

Nominal Diameter 12mm

Nominal Length 80mm

Table A1: Minimum curing time

Minimum base material temperature C°	Gel time (working time) In dry/wet concrete	Curing time in dry concrete	Curing time in wet concrete
0°C ≤ T _{base material} < 10°C	20 min	90 (300 ¹) min	180 (600 ¹)min
10°C ≤ T _{base material} < 20°C	9 min	60 min	120 min
20°C ≤ T _{base material} < 30°C	5 min	30 min	60 min
30°C ≤ T _{base material} ≤ 40°C	3 min	20 min	40 min

The temperature of the cartridge must be ≥ 20°C

⁽¹⁾ Value in the brackets applies for autoclaved aerated concrete

CHEMFIX CH+MAX

Plastic sleeve and curing times

Annex A3

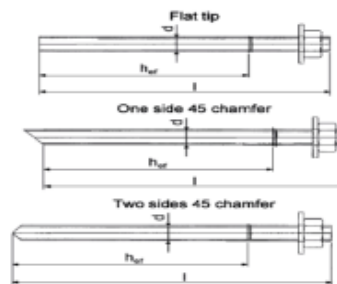


Table A2: Threaded rod dimensions

Anchor size			M6	M8	M10	M12
Diameter of anchor rod	d	[mm] =	6	8	10	12
Size of sleeve	d _{nom} x l _s	[mm] =	12 x 80		16 x 85	
Nominal anchorage depth	h _{af}	[mm] =	80		85	
Maximum diameter hole in fixture	d _{fix}	[mm] ≤	7	9	12	14
Depth of drilled hole to deepest point	h _l	[mm] =	h _{af} + 5 mm			

Table A3: Threaded rods materials

Designation	Material
Threaded rods made of zinc coated steel	
Threaded rod M6 – M12	Strength class 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9 EN ISO 898-1 Steel galvanized ≥ 5µm EN ISO 4042 Hot dipped galvanized ≥ 45µm EN ISO 10684
Washer ISO 7089	Steel galvanized EN ISO 4042; hot dipped galvanized EN ISO 10684
Nut EN ISO 4032	Strength class 8 EN ISO 898-2 Steel galvanized ≥ 5µm EN ISO 4042 Hot dipped galvanized ≥ 45µm EN ISO 10684
Threaded rods made of stainless steel	
Threaded rod M6 – M12	Strength class A2 or A4 – 50, A2 or A4-70 and A4-80 EN ISO 3506-1;
Washer ISO 7089	Strength class A4-70 and A4-80 EN ISO 3506-1;
Nut EN ISO 4032	Strength class A4-70 and A4-80 EN ISO 3506-1;
Threaded rods made of high corrosion resistant steel	
Threaded rod M6 – M12	Strength class 70 or 80. High corrosion resistant steel 1.4529, 1.4565 EN 10088
Washer ISO 7089	High corrosion resistant steel 1.4529, 1.4565 EN 10088
Nut EN ISO 4032	Strength class 70 or 80 EN ISO 3506-2; High corrosion resistant steel 1.4529, 1.4565 EN 10088

Commercial standard threaded rods with:

- material and mechanical properties according to Table A3;
- confirmation of material and mechanical properties by inspection certificate 3.1 according to EN-10204:2004;
- marking of the threaded rod with the embedment depth.

CHEMFIX CH+ MAX	Annex A4
Materials	

Use:

The anchors are intended to be used for anchorages for which requirements for mechanical resistance and stability and safety in use in the sense of the Basic Requirements 1 and 4 of Regulation 305/2011 (EU) shall be fulfilled and failure of anchorages made with these products would compromise the stability of the works, cause risk to human life and/or lead to considerable economic consequences.

Anchors subject to:

- Static and quasi-static loads: M6 to M12

Base materials:

- Solid masonry (Masonry Group b), hollow or perforated masonry (Masonry Group c) or autoclaved aerated concrete masonry (Masonry Group d) according to Annex B9. The mortar strength class of the masonry has to be M 2,5 according to EN 998-2:2010 at minimum

Temperature range:

The anchors may be used in the following temperature range:

- (a) -40°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C)

Use conditions (Environmental conditions):

Threaded rods:

- a) Carbon galvanized steel class 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 or 12.9 according to EN ISO 898-1 for dry internal conditions.
- b) Stainless steel A2 or A4-50, A2 or A4-70, A4-80 and HCR class 70 and 80 for structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition.

Nuts and washers:

Corresponding to anchor rod material mentioned above for the different environmental exposures.

Installation:

Use conditions

- Condition d/d: Installation and use in structures subject to dry, internal conditions.
- Condition w/w: Installation and use in structures subject to dry or wet environmental conditions

Perforation with drilling machine

Proposed design methods:

- Static and quasi-static load: EOTA TR 054, Design Method A.

CHEMFIX CH+ MAX	Annex B1
Intended use - Specification	

Table B1 Installation data for solid masonry (brick n°1)

Size		M6	M8	M10	M12
Nominal drilling diameter	d_0 [mm]	8	10	12	14
Maximum diameter hole in the fixture	d_{fix} [mm]	7	9	12	14
Embedment depth	h_{ef} [mm]	80	80	85	85
Depth of the drilling hole	h_1 [mm]	$h_{ef} + 5$ mm			
Maximum installation torque moment allowed	T_{inst} [Nm]	1	1	1	1
Thickness to be fixed	$t_{fix,min}$ [mm]	> 0			
	$t_{fix,max}$ [mm]	< 1500			
Minimum spacing	S_{min} [mm]	240	240	255	255
Minimum edge distance	C_{min} [mm]	120	120	127.5	127.5

Table B2: Installation data for hollow/perforated masonry (brick n° 2)

Size		M6	M8	M10	M12
Plastic sleeve		12 x 80		16 x 85	
Nominal drilling diameter	d_0 [mm]	12	12	16	16
Maximum diameter hole in the fixture	d_{fix} [mm]	7	9	12	14
Embedment depth	h_{ef} [mm]	80	80	85	85
Depth of the drilling hole	h_1 [mm]	$h_{ef} + 5$ mm			
Maximum installation torque moment allowed	T_{inst} [Nm]	2	2	2	2
Thickness to be fixed	$t_{fix,min}$ [mm]	> 0			
	$t_{fix,max}$ [mm]	< 1500			
Minimum spacing	$S_{min, }$ [mm]	250	250	250	250
	$S_{min,\perp}$ [mm]	120	120	120	120
Minimum edge distance	C_{min} [mm]	100	100	100	100

Table B1 Installation data for autoclaved aerated concrete bricks (brick n°3)

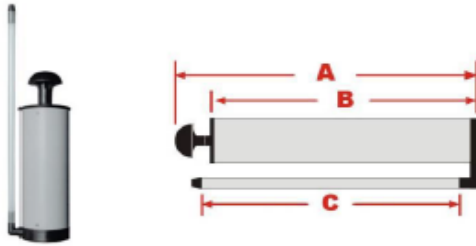
Size		M6	M8	M10	M12
Nominal drilling diameter	d_0 [mm]	8	10	12	14
Maximum diameter hole in the fixture	d_{fix} [mm]	7	9	12	14
Embedment depth	h_{ef} [mm]	80	80	90	100
Depth of the drilling hole	h_1 [mm]	$h_{ef} + 5$ mm			
Maximum installation torque moment allowed	T_{inst} [Nm]	1	1	2	2
Thickness to be fixed	$t_{fix,min}$ [mm]	> 0			
	$t_{fix,max}$ [mm]	< 1500			
Minimum spacing	S_{min} [mm]	240	240	270	300
Minimum edge distance	C_{min} [mm]	120	120	135	150

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Annex B2

Intended use - data

Manual blower pump: nominal dimensions



190mm (240x190x300mm)	280mm (330x280x300mm)	400mm (420x370x350mm)
-(A) : 240mm (overall)	-(A) : 330mm (overall)	-(A) : 420mm (overall)
-(B) : 190mm (Body)	-(B) : 280mm (Body)	-(B) : 370mm (Body)
-(C) : 300mm (Tube)	-(C) : 300mm (Tube)	-(C) : 350mm (Tube)

Steel Wire Brushes

Specification

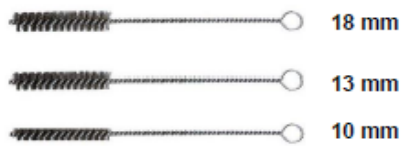


Table B3: Brush diameter

Type of threaded rod			Use in solid masonry and AAC				Use in hollow/perforated masonry			
			M6	M8	M10	M12	M6	M8	M10	M12
d ₀	Nominal drill hole	[mm]	8	10	12	14	16	16	16	16
d _b	Brush diameter	[mm]	10	10	13	13	18	18	18	18

CHEMFIX CH+ MAX

Annex B3

Cleaning tools

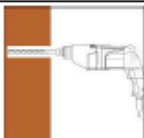
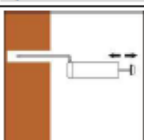
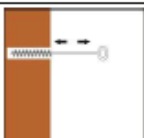
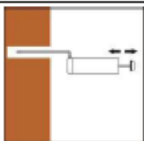
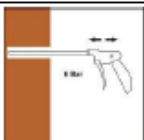
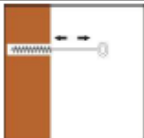
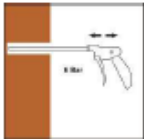
Resin injection pump details		
Image	Size Cartridge / Code	Type
	165 / 300ml 165 / 300 ml 10:1	Manual
	345 / 380 / 400 / 410 / 420ml 420 ml 10:1 345 ml 10:1	Manual
	165 / 300 / 345 / 380 / 400 / 410 / 420ml 165 / 300 ml 345ml 380 / 400 / 410 / 420 ml 7.4v Tool	Battery
	380 / 400 / 410 / 420 / 825ml 380 / 400 / 410 / 420 ml 825ml	Pneumatic

CHEMFIX CH+ MAX

Annex B4

Tools for injection

Table B4 - parameters: drilling, hole cleaning and installation in solid brick work (solid clay and AAC)

Instructions for use		
Bore hole drilling		
		Drill hole to the required embedment depth with a hammer drill set in rotation-hammer mode using an appropriately sized carbide drill bit.
Bore hole cleaning Just before setting an anchor, the bore hole must be free of dust and debris.		
a) Manual air cleaning (MAC)		
	X 4	The manual pump may be used for blowing out bore holes. Blow out at least 4 times from the back of the bore hole until return air stream is free of noticeable dust.
	X 4	Brush 4 times with the specified brush size (brush Ø ≥ bore hole Ø, see Table B3) by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. The brush must produce natural resistance as it enters the bore hole. If not, the brush is too small and must be replaced with the proper brush diameter.
	X 4	Blow out again with manual pump at least 4 times until return air stream is free from noticeable dust.
b) Compressed air cleaning (CAC)		
	X 2	Blow 2 times from the back of the hole (if needed with a nozzle extension) over the hole length with oil-free compressed air (min. 6 bar at 6m³/h) until return air stream is free from noticeable dust.
	X 2	Brush 2 times with the specified brush size (brush Ø ≥ bore hole Ø, see Table B3) by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. The brush must produce natural resistance as it enters the bore hole. If not, the brush is too small and must be replaced with the proper brush diameter.
	X 2	Blow out again with compressed air at least 2 times until return air stream is free from noticeable dust.
CHEMFIX CH+ MAX		Annex B5
Procedure for solid masonry (1)		

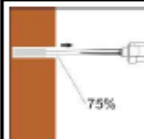
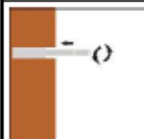
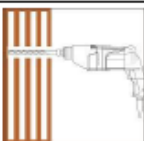
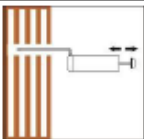
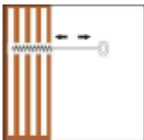
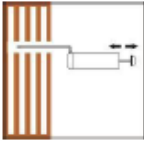
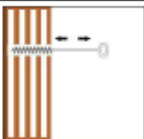
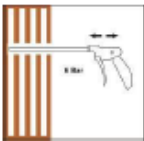
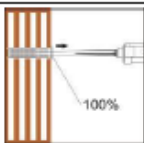
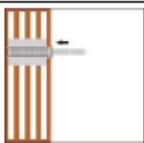
Instructions for use	
	Remove the threaded cap from the cartridge. Cut open the foil bag below the clip if necessary. (Chubpack cartridges).
	Tightly attach the T-Flow™ mixing nozzle. Do not modify the mixer in any way. Make sure the mixing element is inside the mixer. Use only the supplied mixer.
	Insert the cartridge into the Chemfix dispenser gun.
	Discard the initial trigger pulls of adhesive. Depending on the size of the cartridge, an initial amount of adhesive mix must be discarded. Discard quantities are – 10cm for all cartridges
Instructions for use	
	Insert the nozzle to the bottom of the hole and inject the resin until the hole is filled 75%
	Insert the anchor, slowly with a slight twisting motion into the hole. Remove excess resin and leave the fixing until minimum curing (loading) times has elapsed
CHEMFIK CH+ MAX	Annex B6
Procedure for solid masonry (2)	

Table B5 - parameters: drilling, hole cleaning and installation in hollow brick work

Instructions for use		
Bore hole drilling		
		Drill hole to the required embedment depth with a hammer drill set in rotation-hammer mode using an appropriately sized carbide drill bit.
Bore hole cleaning Just before setting an anchor, the bore hole must be free of dust and debris.		
a) Manual air cleaning (MAC)		
	X 4	The manual pump may be used for blowing out bore holes. Blow out at least 4 times from the back of the bore hole until return air stream is free of noticeable dust.
	X 4	Brush 4 times with the specified brush size (brush Ø ≥ bore hole Ø, see Table) by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. The brush must produce natural resistance as it enters the bore hole. If not, the brush is too small and must be replaced with the proper brush diameter.
	X 4	Blow out again with manual pump at least 4 times until return air stream is free from noticeable dust.
b) Compressed air cleaning (CAC)		
	X 2	Blow 2 times from the back of the hole (if needed with a nozzle extension) over the hole length with oil-free compressed air (min. 6 bar at 6m³/h) until return air stream is free from noticeable dust.
	X 2	Brush 2 times with the specified brush size (brush Ø ≥ bore hole Ø, see Table B3) by inserting the steel brush to the back of the hole (if needed with an extension) in a twisting motion and removing it. The brush must produce natural resistance as it enters the bore hole. If not, the brush is too small and must be replaced with the proper brush diameter.
	X 2	Blow out again with compressed air at least 2 times until return air stream is free from noticeable dust.
CHEMFIX CH+ MAX		Annex B7
Procedure for hollow/perforated masonry (1)		

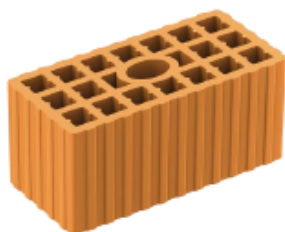
Instructions for use		
		Remove the threaded cap from the cartridge without cutting. Cut open the foil bag below the clip if necessary. (Chubpack cartridges).
		Tightly attach the mixing nozzle. Do not modify the mixer in any way. Make sure the mixing element is inside the mixer. Use only the supplied mixer with the adhesive.
		Insert the cartridge into the dispenser. Press the release trigger to retract the plunger and insert the cartridge neatly into the cradle without any distortion.
		Discard the initial trigger pulls 10cm of adhesive. Resin will flow from the cartridge as soon as dispensing is initiated.

Instructions for use		
		Introduce the sleeve of suitable dimension (see table) to the back of the hole so that the collar is level with the hole face. The cap may be opened to allow full nozzle insertion.
		Insert the nozzle to the end of the sleeve and inject the resin until the sleeve is 100% filled. Close the cap.
		Insert the anchor, slowly with a slight twisting motion into the sleeve. Remove excess resin and leave the fixing until minimum curing (loading) times has elapsed

CHEMFIX CH+ MAX	Annex B8
Procedure for hollow/perforated masonry (2)	



Brick n° 1
 Category b: Solid clay masonry:
Mattone pieno UNI (120 mm x 60 mm x 250 mm)
 Bulk density class $\rho=1.6 \text{ kg/dm}^3$
 Minimum compressive strength $f_b=18 \text{ MPa}$



Brick n° 2
 Category c: Hollow masonry:
Doppio UNI (120 mm x 120 mm x 250 mm)
 Bulk density class $\rho=0.9 \text{ kg/dm}^3$
 Minimum compressive strength $f_b=6.0 \text{ MPa}$



Brick n° 3
 Category d: Autoclaved aerated concrete
Porenbeton AAC (624 mm x 249 mm x 400 mm)
 Bulk density class $\rho=0.35 \text{ kg/dm}^3$
 Minimum compressive strength $f_b=2.5 \text{ MPa}$

CHEMFIX CH+ MAX	Annex B9
Type and dimensions of brick	

Table C1: Design method A, characteristic tension and shear load values

ESSENTIAL CHARACTERISTICS			PERFORMANCE			
Installation parameters			M6	M8	M10	M12
d		[mm]	6	8	10	12
d ₀ category b (solid masonry) and category d (AAC)		[mm]	8	10	12	14
d ₀ category c (hollow or perforated masonry)		[mm]	12	12	16	16
Type of plastic sleeve for use in category c			12x80	12x80	16x85	16x85
d _{fix}		[mm]	7	9	12	14
h ₁		[mm]	h _{ef} + 5 mm			
t _{fix}	Min	[mm]	> 0			
	Max	[mm]	≤ 1500 mm			
* Resistance for tensile and shear load Temperature range -40°C/+40°C (T _{amb} = 24°C)			M6	M8	M10	M12
Brick n°1 (solid clay)	N _{Rk}	[kN]	4	4	5	5
	V _{Rk}	[kN]	2	2	6	6
Brick n°2 (hollow)	N _{Rk}	[kN]	0,75	0,75	1,5	1,5
	V _{Rk}	[kN]	1,5	1,5	1,5	1,5
Brick n°3 (solid AAC)	N _{Rk} d/d	[kN]	0,6	1,2	2	1,5
	N _{Rk} w/w	[kN]	0,5	0,4	2	1,2
	V _{Rk}	[kN]	1,2	1,2	2,5	3,5

Table C2: Characteristic bending moments

Size			M6	M8	M10	M12
Characteristic resistance with standard threaded rod grade 4.6	M _{Rk,s}	[Nm]	6	15	30	52
Partial safety factor	γ _{M5}	[-]	1,67			
Characteristic resistance with standard threaded rod grade 5.8	M _{Rk,s}	[Nm]	8	19	37	66
Partial safety factor	γ _{M5}	[-]	1,25			
Characteristic resistance with standard threaded rod grade 8.8	M _{Rk,s}	[Nm]	12	30	60	105
Characteristic resistance with standard threaded rod grade 10.9	M _{Rk,s}	[Nm]	15	37	75	131
Partial safety factor	γ _{M5}	[-]	1,25			
Characteristic resistance with standard threaded rod stainless steel A2, A4-70 and HCR (class 70)	M _{Rk,s}	[Nm]	11	26	52	92
Partial safety factor	γ _{M5}	[-]	1,56			
Characteristic resistance with standard threaded rod stainless steel A4-80 and HCR (class 80)	M _{Rk,s}	[Nm]	12	30	60	105
Partial safety factor	γ _{M5}	[-]	1,33			

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Annex C1

Performance for static and quasi-static loads: Resistances

Table C3: Characteristic values for tension and shear load.

ESSENTIAL CHARACTERISTICS			PERFORMANCE			
* Resistance for tensile and shear load Temperature range -40°C/+40°C (T _{imp} = 24°C)			M6	M8	M10	M12
γ _{Mm} for category b and c (solid and hollow bricks)			2,50			
γ _{MAAC} for category d (AAC bricks)			2			
Brick n°1	S _{ct,N}	[mm]	240	240	255	255
	C _{ct,N}	[mm]	120	120	127,5	127,5
Brick n°2	S _{ct,N,l}	[mm]	250	250	250	250
	S _{ct,N,d}	[mm]	120	120	120	120
	C _{ct,N}	[mm]	100	100	100	100
Brick n°3	S _{ct,N}	[mm]	240	240	270	300
	C _{ct,N}	[mm]	120	120	135	150
β coefficient for in situ test (ETAG 029 Annex B) Temperature range: -40°C/+40°C			M6	M8	M10	M12
Brick N° 1 - Solid brick	β	[-]	0,64	0,64	0,66	0,66
Brick N° 2 - Hollow/perforated brick	β	[-]	0,64	0,64	0,66	0,66
Brick N° 3 - Solid AAC d/d conditions	β	[-]	0,38	0,83	0,81	0,735
Brick N° 3 - Solid AAC w/w conditions	β	[-]	0,25	0,25	0,83	0,55
Displacement under service load						
Tensile load						
Temperature range -40°C/+40°C (T _{imp} = 24°C)						
Brick n°1 – Solid clay brick			M6	M8	M10	M12
Admissible service load in tensile	F	[kN]	1,14		1,43	
Displacement	δ _{N0}	[mm]	0,14	0,14	0,07	0,05
	δ _{N∞}	[mm]	0,28	0,28	0,13	0,09
Brick n°2 – Hollow/perforated clay brick			M6	M8	M10	M12
			With sleeve	With sleeve	With sleeve	With sleeve
Admissible service load in tensile	F	[kN]	0,21		0,43	
Displacement	δ _{N0}	[mm]	0,07	0,07	0,16	0,11
	δ _{N∞}	[mm]	0,13	0,13	0,31	0,22
Brick n°3 – AAC			M6	M8	M10	M12
Admissible service load in tensile	F d/d	[kN]	0,2	0,4	0,7	0,5
	F w/w	[kN]	0,2	0,1	0,7	0,4
Displacement	δ _{N0,d/d}	[mm]	0,013	0,026	0,025	0,093
	δ _{N0,w/w}	[mm]	0,011	0,009	0,025	0,074
	δ _{N∞,d/d}	[mm]	0,027	0,052	0,050	0,186
	δ _{N∞,w/w}	[mm]	0,022	0,017	0,050	0,149
CHEMFIX CH+ MAX			Annex C2			
Performance for static, quasi-static loads: Displacements						

Table C3 cont.: Characteristic values for tension and shear load.

ESSENTIAL CHARACTERISTICS		PERFORMANCE			
Displacement under service load					
Shear load					
Temperature range -40°C/+40°C (T _{imp} = 24°C)					
Brick n°1 – Solid brick		M6	M8	M10	M12
Admissible service load in shear	F [kN]	0,57		1,71	
Displacement	δ _{v0} [mm]	0,15	0,15	0,26	0,27
	δ _{v∞} [mm]	0,22	0,22	0,39	0,41
Brick n°2 – Hollow/perforated brick		M6	M8	M10	M12
		With sleeve	With sleeve	With sleeve	With sleeve
Admissible service load in shear	F [kN]	0,43			
Displacement	δ _{v0} [mm]	1,01	1,01	0,5	0,36
	δ _{v∞} [mm]	1,52	1,52	0,74	0,54
Brick n°3 – Solid AAC		M6	M8	M10	M12
Admissible service load in shear	F [kN]	0,4		0,9	1,3
Displacement	δ _{v0} [mm]	0,234		0,747	1,120
	δ _{v∞} [mm]	0,351		0,759	1,139

Table C4: Reaction to fire.

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Reaction to fire	In the final application the thickness of the mortar layer is about 1 to 2 mm and most of the mortar is material classified class A1 according to EC Decision 96/603/EC. Therefore, it may be assumed that the bonding material (synthetic mortar or a mixture of synthetic mortar and cementitious mortar) in connection with the metal anchor in the end use application do not make any contribution to fire growth or to the fully developed fire and they have no influence on the smoke hazard.

Table C5: Resistance to fire.

ESSENTIAL CHARACTERISTICS	PERFORMANCE
Resistance to fire	No performance assessed

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Annex C3

Performance for static and quasi-static loads: Displacements