

# IKA-CPIII 300ML SPECIFICATION



## Product Description

IKA - CPIII – New generation, EU approved, Styrene-free, low odour, polyester chemical mortar system. Increased load capacity, higher performance, rapid cure, two part, chemical anchoring.

Applied in a single action this mortar will afford consistent, cost effective, high load, structural anchoring.

## Key Features

- Use in solid concrete or brick applications (dry or wet conditions).
- Ideal for use in cavity brick (use with plastic/metal mesh sleeves to reduce waste).
- Non-flammable and non-hazardous.
- May be used with simple silicone gun.

## Approvals



INSTYTUT TECHNIKI BUDOWLANEJ  
Aprobacje Technicznej  
ITB nr AT-15-6900:2011  
ITB-978/W



Approval nr. CAZ 0834/2  
Valid 2013-2016  
For use with hollow & masonry

		CE 1488	
15		11	
1488-CPD-0195/W			
ETA-15/0008 ETAG 01-05 Option 7 M8 - M16 For use in Uncracked Concrete		ETA-11/0032 ETAG 029 For Masonry & Hollow Walls	
European Technical Approval		European Technical Approval	

## IMPORTANT NOTE

Performance based on clean holes; HAMMER DRILLED - blown and then brushed with a stiff metal brush & blown again.

## Typical Gel and Curing Time\*

\*Full cure is achieved after 24 hours.

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5	-5	-10**
TYPICAL GEL TIME (mins)	3	5	8	15	40	40
MIN. LOAD TIME (mins)	30	45	60	120	240	240

\*\*Resin temperature must be at least 20°C

## Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{ck, cube} = 25\text{N/mm}^2$ (C20/25) 5.8 Grade Steel									SETTING DATA				
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing (mm)	Hole Diameter In Concrete	Hole Diameter In Fixture	Standard Embedment In Concrete	Recommended Torque (Nm)	Approx. No. of Holes per 300mm Cartridge
	Tension ( $N_{rk}$ )	Shear ( $V_{rk}$ )	Tension ( $N_{rd}$ )	Shear ( $V_{rd}$ )	Tension ( $N_{rec}$ )	Shear ( $V_{rec}$ )	Tension ( $C_{cr,N}$ )	Shear ( $C_{cr,V}$ )	(mm)	(mm)	(mm)	(mm)	Concrete/Brick	
M8	19.0	9.5	12.7	7.6	9.0	5.4	80	80	160	10	9	80	11 / 5	66
M10	28.5	15.1	13.1	12.1	9.3	8.6	100	90	200	12	11	90	22 / 17	48
M12	40.5	21.9	18.7	17.5	13.3	12.5	120	110	240	14	13	110	38 / 28	32
M16	68.0	40.8	31.5	32.7	22.5	23.3	160	125	320	18	17	125	95 / 75	20
M20	89.9	63.7	41.6	51.0	29.7	36.4	200	180	400	24	22	170	170 / -	6
M24	112.6	91.8	52.1	73.4	37.2	52.4	240	220	480	28	26	210	260 / -	5
M30	-	-	-	-	-	-	265	280	525	35	33	280	480 / -	1

## Typical Ultimate Physical Properties

	N/mm <sup>2</sup>	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	53.00	(EN ISO 604) / (ASTM 695)	This product should be stored between +5°C & +25°C.  The Shelf life of the product is 12 months from the manufacture date.	The information and data given is based on our own experience, research and testing and is believed to be reliable and accurate. However, as IKA Anchors cannot know the varied uses to which its products may be applied, or the methods of application used, no warranty as to the fitness or suitability of its products is given or implied. It is the users responsibility to determine suitability of use. For further information please contact our Technical Department.
FLEXURAL STRENGTH	19.48	(EN ISO 178) / (ASTM 790)		
FLEXURAL MODULUS	3038	"		
TENSILE STRENGTH	8.88	(EN ISO 527) / (ASTM 638)		
E MODULUS	17865	"		
VOC CONTENT	0.143 %	2.31 g / L		

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## Typical Performance in Hollow Substrate

SIZE	Recommended Load (kN) Tension or Shear ( $F_{ec}$ )	
	Brickwork 20.5 N/mm <sup>2</sup>	Blockwork 7 N/mm <sup>2</sup>
M8	1.7	0.8
M10	3.4	1.7
M12	4.8	2.7
M16	5.6	3.6

## Reduction factors: Spacings and Edge Distances

Spacing Reduction Factor $f_a$								Edge Distance Reduction Factor $f_r$																		
Tensile Load / Shear Load								Tensile Load $f_{rN}$									Shear Load $f_{rV}$									
Spacing	$\varnothing$ Anchors / Rebar (mm)							Edge Distance (mm)	$\varnothing$ Anchors / Rebar (mm)									$\varnothing$ Anchors / Rebar (mm)								
	8	10	12	16	20	24	30		8	10	12	16	20	24	30	(mm)	8	10	12	16	20	24	30			
40	0.64							40	0.64							40	0.25									
50	0.67	0.63						50	0.73	0.63						50	0.44	0.30								
60	0.70	0.65	0.63					60	0.82	0.70	0.63					60	0.63	0.48	0.30							
70	0.73	0.68	0.64					70	0.90	0.77	0.68					70	0.81	0.65	0.44							
80	0.76	0.70	0.66	0.63				80	1.00	0.84	0.74	0.63				80	1.00	0.83	0.58	0.40						
90	0.79	0.73	0.68	0.64				90		0.91	0.80	0.67				90		1.00	0.72	0.53						
100	0.82	0.75	0.70	0.65	0.63			100		1.00	0.86	0.72	0.63			100			0.86	0.67	0.35					
125	0.89	0.81	0.75	0.69	0.66	0.63		110			0.92	0.77	0.66			110			1.00	0.80	0.44					
150	0.96	0.88	0.80	0.73	0.69	0.65	0.63	120			1.00	0.81	0.70	0.64		125				1.00	0.58	0.35				
160	1.00	0.90	0.82	0.74	0.70	0.66	0.64	140							140									0.30		
175		0.94	0.85	0.76	0.72	0.68	0.65	160				1.00	0.85	0.73	0.66	160						0.91	0.62	0.35		
200		1.00	0.90	0.80	0.75	0.70	0.68	180					0.93	0.80	0.72	180				1.00		0.77	0.46			
225			0.95	0.84	0.78	0.73	0.70	200					1.00	0.86	0.78	200						0.92	0.57			
240				1.00	0.86	0.80	0.75	220						0.92	0.84	220						1.00	0.68			
250					0.87	0.81	0.76	240						1.00	0.90	240							0.78			
275					0.91	0.84	0.78	265							1.00	280								1.00		
280					0.92	0.85	0.79	276																		
300					0.95	0.88	0.81	288																		
320					1.00	0.90	0.83	320																		
350						0.94	0.86	350																		
400						1.00	0.92	400																		
440							0.96	440																		
480							1.00	480																		
500								500																		
525							1.00	525																		

## Characteristic ( $V_{rk,s}$ ) & Design ( $V_{rd,s}$ ) Shear Loads for Various Stud Grades + Rebar

Stud Diameter (mm)	Stud Grade 5.8		Stud Grade 8.8		Stud Grade 10.9		Stud Grade A4-70		Stud Grade A4-80		Rebar Diameter (mm)	BSt 500 Rebar	
	$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)	$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)	$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)	$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)	$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)		$V_{rk,s}$ (kN)	$V_{rd,s}$ (kN)
M8	9.5	7.6	14.6	11.7	19.0	15.2	12.8	8.2	14.6	9.4	8	16.6	11.1
M10	15.1	12.1	23.2	18.6	30.2	24.1	20.3	13.0	23.2	14.9	10	25.9	17.3
M12	21.9	17.5	33.7	27.0	43.8	35.1	29.5	18.9	33.7	21.6	12	37.3	24.9
M16	40.8	32.7	62.8	50.2	81.6	65.3	55.0	32.5	62.8	40.3	14	50.8	33.9
M20	63.7	51.0	98.0	78.4	127.4	101.9	85.8	55.0	98.0	62.8	16	66.4	44.3
M24	91.8	73.4	141.2	113.0	183.6	146.8	123.6	79.2	141.2	90.5	20	103.9	69.3
M30	142.5	114.0	207.6	166.1	269.9	215.9	129.8	64.9	207.6	103.8	25	162.0	108.0
											32	265.1	176.7
											40	414.6	276.4

### Notes:

All grades shown for information. M30 for A4-70 tensile strength of 500N/mm<sup>2</sup>, instead of 700N/mm<sup>2</sup>.  
Safety Factor is 1.25 for all carbon steel. Safety Factor is 1.56 for stainless steel, up to M24, M30 is 2.0. Safety Factor is 1.5 for BSt 500 rebar.