

# Technical Data Sheet: CHE-OXYGLUE-200™ Vinylester Chemical Anchor

## INTRODUCTION

**CHE-OXYGLUE-200™** is a high performance, rapid curing two-component chemical anchoring system based on epoxy acrylate. Applied in one single action this resin with produce a cost effective, strong chemical resistant fixing. It provides rapid cure with adequate working time in temperate climates.

## ACCESSORIES

- Caulking gun for 360ml side by side cartridge
- Static mixer



## APPLICATIONS

### Typical Applications:

- In building and construction industry: Grouting and rebaring, fencing, slab starter bars, rock anchoring, foundation strengthening, slab extension, etc.

### Other Applications:

- Metal industry: Metal to metal joint, metal to concrete joint, metal to metal repair solutions
- Oil and gas industry: Refinery pipelines, high pressure pipeline repair, metal loss and pipeline leakage
- Solar industry: solar panel fixing to concrete, solar panel fixing to meal
- Fabrication and advertisement industry: hoarding fixing, railing fixing
- Railway Industry: Infrastructure of railroad, railroad structure ties with fasteners

**Bases:** Solid brick, hollow brick, concrete, marble, rock/stone, solid blocks

## ADVANTAGE

- High to medium duty load
- Quick setting and curing time, good for over-head installation
- Free of styrene
- Low VOC (volatile organic compound), suitable for indoor application
- Chemical resistant, and high durability over time
- Can be reused by replacing the static mixer
- Can be used with wet concrete (Reduction of recommended loads of about 20%).

## PRODUCT SPECIFICATION and TEST RESULTS

Material: Vinylester Styrene Free

Size: 360ml

Shelf Life: 18months

Test Results:

Mixing Ratio: 10:1 (weight ratio)

Mixed Color: Gray

Standard Package: One cartridge with two mixer

Test Item	Test Method	Test Results
Gel Time (min)	Refer to ASTM D2471-99	10
Bond Strength (kgf/cm <sup>2</sup> )	Refer to ASTM C882/C882M-13	42.0
Pull-off Strength (kgf/cm <sup>2</sup> ) (Motar)	Refer to ASTM D4541-09 Type V	13.7
Water Absorption (%) (23°C, 24h)	ASTM D570-98 (2010)	0.77
Compressive Strength (kgf/cm <sup>2</sup> )	ASTM D695-15	944
Tensile Strength (kgf/cm <sup>2</sup> )	ASTM D638-14	117
Elongations at break (%)	(Type I, V = 5mm/min)	0.16
Vicat Softening Temperature (°C) (50N)	ASTM D1525-09 (Rate of temperature rise: 50°C/h)	142.7
Water Resistance (23°C, 14days)	Refer to ASTM D543-14	No visible change on the appearance
Dimensional Shrinkage (%) (70°C, 24h)	MD	-0.04
	CD	-0.03
Flexural Strength (kgf/cm <sup>2</sup> )	ASTM D790-15	377
Flexural Modulus (kgf/cm <sup>2</sup> )	Procedure A1	57324

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### ATTENTION

- Do not install the product when substrate temperature is less than 0°C
- Do not install when the product temperature is less than 10°C
- At temperatures below 10°C, the product should be warmed or stored in 10 - 30°C for 24hours prior to use to improve product flow and cure
- Can be used again by replacing the static mixer
- If there is mortar left in the cartridge, please clean the opening, put the cap back and seal tightly
- Use OXYGLUE static mixer only to ensure effective mixing
- If the gelling time expires, please use a new static mixer
- Do not cut or shorten the static mixer
- Ensure spiral mixer is in place in the static mixer
- Do not install into uncured concrete
- Ensure hole is properly cleaned
- Not suitable for use in diamond cored holes without roughening
- Hole can be damp but must be free of water
- Do not dilute mortar with any solvents and/or any chemicals

### FIXING PER CARTRIDGE

Anchor Size		Hole Dimension		Fixing per Cartridge of 360ml
Number	Diameter (mm)	Diameter (mm)	Depth (mm)	
#3 (10Ø)	9.52	13	90	37
#4 (12Ø)	12.7	16	125	17
#5 (16Ø)	15.8	20	145	9
#6 (20Ø)	19.05	25	170	5
#7 (22Ø)	22.225	28	200	3
#8 (25Ø)	25.4	32	225	2
#9 (28Ø)	28.65	37	260	1
#10 (32Ø)	32.25	40	290	1

Anchor Size		Hole Dimension		Fixing per Cartridge of 360ml
Number	Diameter (mm)	Depth (mm)		
M8	10	80		71
M10	12	90		37
M12	14	110		18
M16	18	125		9
M20	24	170		5
M24	28	210		3
M30	35	270		1
M36	40	330		1

Note: Based on continuous installation without interruptions or nozzle changes. Provided as a guide and may vary with temperature and applicator.

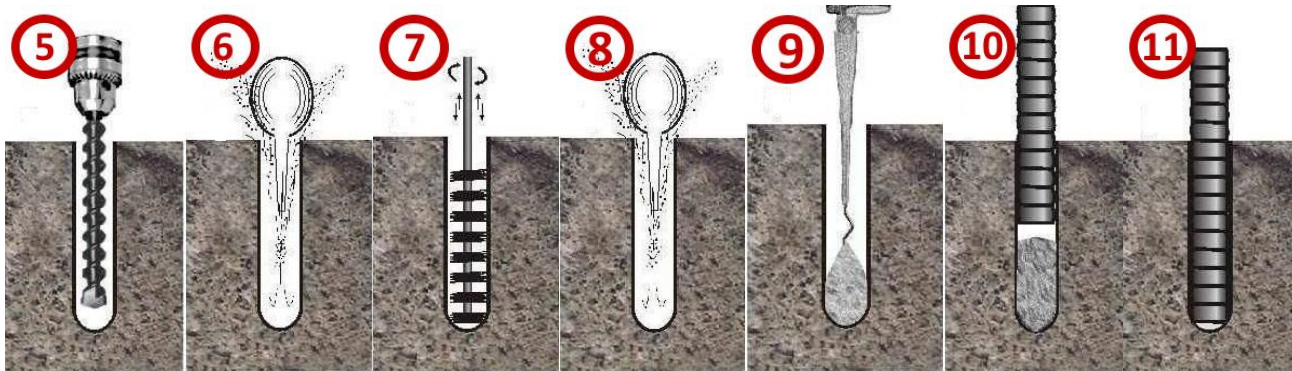
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### APPLICATION INSTRUCTION: Cartridge Installation:



1. Open cartridge
2. Attach OXYGLUE static mixer tightly to the cartridge.
3. Assemble cartridge into caulking gun as shown on the picture
4. Dispose the initial 2 to 3 triggers until the color of the mixer becomes homogeneously gray

### Product Application:



5. Drill hole using rotary hammer drill bit to the desired depth
6. Blow out dust with the blower
7. Clean hole with cleaning brush with stiff nylon or wire bristles
8. Blow out the remaining dust with the blower
9. Injection of the product should from the bottom. It must be injected without creating any air-pockets.
10. Insert studs or anchors using slow rotary motion. The inserts must be clean and oil free. Wipe away access product from the surface when done.
11. Do not touch the studs or anchors until the mortar has gelled. Do not load the anchor until the curing is completed. The time varies with different temperature, for detailed gelling and curing time, please refer to the below table.

### CURING TIMETABLE

Temperature (°C)	Gelling Time	Full Curing Time
0 ~ 5	-	4 hours
5 ~ 10	16 mins	3 hours
10 ~ 20	12 mins	2 hours
20 ~ 30	8 mins	60 mins
30 ~ 40	3 mins	30 mins

\* Do not touch the inserts until the mixer has gelled. Do not load the anchor until curing is complete.

\* Regardless of the temperature, it is highly suggested to do the pull-out test 24 hours after the product is completely gelled.

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### SOLID SUBSTRATE REBAR INSTALLATION DETAILS

Rebar		Destroy Haul Strength		Safety Haul Strength		Hole Dimension	
Number	Diameter (mm)	(kgf)	(kN)	(kgf)	(kN)	Diameter (mm)	Depth (mm)
#3 (10Ø)	9.52	3,540	35.8	1,180	11.9	13	90
#4 (12Ø)	12.7	5,480	55.4	1,827	18.5	16	125
#5 (16Ø)	15.8	9,060	91.5	3,020	30.5	20	145
#6 (20Ø)	19.05	14,150	142.9	4,717	47.6	25	170
#7 (22Ø)	22.225	18,630	188.2	6,210	62.7	28	200
#8 (25Ø)	25.4	23,195	234.3	7,732	78.1	32	225
#9 (28Ø)	28.65	25,340	256.0	8,447	85.3	37	260
#10 (32Ø)	32.25	32,120	324.4	10,707	108.1	40	290

Remark:

- Concrete Strength  $f_c'$ : 280kg/cm<sup>2</sup> (4000 psi)
- Rebar Strength: #3~#5  $f_y$ : 2,800 kgf/cm<sup>2</sup>, #6~#11  $f_y$ : 4,200 kgf/cm<sup>2</sup>

### REBAR EDGE DISTANCES AND REDUCTION FACTOR

SPACING	Rebar Number							
	#3	#4	#5	#6	#7	#8	#9	#10
50	0.57							
60	0.64							
70	0.73		0.54					
80	0.77	0.62	0.58					
90	0.87	0.64	0.64	0.56				
100		0.73	0.70	0.58	0.55			
110		0.82	0.76	0.63	0.57			
120		0.86	0.82	0.64	0.60	0.54		
140			0.88	0.72	0.64	0.59		
160				0.82	0.76	0.64	0.54	
180				0.89	0.82	0.73	0.57	0.57
200					0.86	0.76	0.68	0.56
220						0.82	0.73	0.64
240						0.85	0.83	0.71
260							0.87	0.74
280								0.81
300								0.87

Note:

The data offered in the above tables are for customers' reference only. The product strength may vary with the way of application, local climate, and the concrete strength. It is recommended to verify the data on the construction site.

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### SOLID SUBSTRATE THREADED ROD INSTALLATION DETAILS

Threaded Rod Number	Destroy Haul Strength		Safety Haul Strength		Hole Dimension	
	(kgf)	(kN)	(kgf)	(kN)	Diameter (mm)	Depth (mm)
M8	2,550	25.8	850	8.6	10	80
M10	3,455	34.9	1,152	11.6	13	90
M12	5,403	54.6	1,801	18.2	16	120
M16	6,303	63.7	2,101	21.2	20	145
M20	8,104	81.9	2,701	27.3	25	170
M24	15,655	158.1	5,218	52.7	28	210
M30	31,290	316.1	10,430	105.4	35	270
M36	44,300	447.5	14,767	149.2	40	330

Remark:

- Concrete Strength  $f_c$ : 280kg/cm<sup>2</sup> (4000 psi)
- Rebar Strength: #3~#5  $f_y$ : 2,800 kgf/cm<sup>2</sup>, #6~#11  $f_y$ = 4,200 kgf/cm<sup>2</sup>

### THREADED ROD EDGE DISTANCES AND REDUCTION FACTOR

SPACING	Threaded Rod Number							
	M8	M10	M12	M16	M20	M24	M30	M36
50	0.57							
60	0.66							
70	0.73		0.54					
80	0.79	0.62	0.58					
90	0.87	0.66	0.64	0.56				
100		0.73	0.71	0.56	0.54			
110		0.82	0.76	0.61	0.57			
120		0.88	0.82	0.64	0.61	0.53		
140			0.86	0.70	0.64	0.58		
160				0.82	0.76	0.62	0.54	
180				0.85	0.83	0.65	0.57	0.55
200					0.86	0.76	0.68	0.57
220						0.82	0.72	0.64
240						0.87	0.81	0.71
260							0.85	0.73
280								0.81
300								0.86

### !! IMPORTANT !!

The information and data given is based on our own experience, research and testing and is believed to be reliable and accurate. However, as OXYGLUE products 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 user's responsibility to determine suitability of use. For further information please contact us through [sales@chevetol.com](mailto:sales@chevetol.com)