



---

## GU-500 400ML TECHNICAL DATA SHEET

---

### PRODUCT

Good Use GU-500 is a two-component, high strength adhesive anchoring system. The system includes injection adhesive in plastic cartridges, mixing nozzles, dispensing tools and hole cleaning equipment. The GU-500 is designed for bonding threaded rod and reinforcing bar hardware into drilled holes in concrete base and solid masonry materials.

### PRODUCT CODE

- GU-500 Injection Cartridge 3:1 two components
- Pure Epoxy resin styrene free
- Available size: 400ml(side by side cartridge)

### DESCRIPTION

GU-500 Pure Epoxy 3:1 resin is a high performance, two components pure epoxy resin system. Applied in one single action this resin will produce a high performance, strong fixing with exceptionally high chemical resistance.

GU-500 provides rapid cure with adequate working time in temperate climates.

### APPLICATION

- Fixing machines, handrails, steel constructions, wooden constructions, reinforcement bars, especially suitable for big diameter rebar and rods.
- Bonding threaded rod and reinforcing bar into hardened concrete.
- Suitable to resist loads in cracked or uncracked concrete base material for cases where anchor design theory and criteria applies.
- Can be installed in a wide range of base material temperatures.
- Medium & Heavy duty load applications.
- High durability.
- Ideal for indoor usage.

### PRODUCT FEATURES

- High grip force, high adhesive force.
- Longer working time.
- Designed for use with threaded rod and reinforcing bar hardware elements.
- Special application to diamond drilled holes and large bore diameter.
- The product ingredient is low odor and non-toxic.
- Orange color can be easily detected or monitored.
- Wide temperature range(5°C~+40°C)
- Styrene free.



GU-500 400ML



STATIC MIXER #818



---

## GU-500 400ML TECHNICAL DATA SHEET

---

### ATTENTION

- Do not install anchors when substrate temperature is less than 0°C.
- Do not install anchors when the GU-500 mortar temperature is less than 15°C.
- At temperatures below 15°C, GU-500 should be warmed or stored in temperatures of 10-30°C for 24 hours prior to use to improve product flow and cure.
- If the gelling time expires, please use a new static mixer.
- Do not cut or shorten nozzles.
- If the cartridge is not finished, please clean the opening, then put the plug back and cap tightly.
- It can be used again in the future by replacing the static mixer.
- Please ensure hole is properly cleaned. Hole may be damp but must be free from water.
- Do not dilute mortar with any solvents and/or other chemicals.
- Please ensure spiral mixer in nozzles.
- Do not install into uncured concrete.
- Please use Good Use nozzles, other nozzles may cause ineffective mixing and reduce the properties of the mortar.

### ACCESSORIES

- Static mixer #818.
- Caulking gun #810 for 400ml(3:1) cartridge.
- Caulking gun G34-400LA for 400ml(3:1) cartridge.
- Nylon Sleeve #819 M15X85MM, M16X85MM



#810 400ML  
CAULKING GUN



G34-400LA



#819 NYLON SLEEVE

### STORAGE/SHELF LIFE

- 18 months after the manufactured day in dry and dark environment with temperature ranging from 10°C~30°C.
- Avoid direct sunlight.

### PACKAGING INFORMATION

- Each cartridge is packed in plastic bag with 1 free static mixer #818.
- Standard package: 20pcs in 1 export carton.
- Different package is available: we can do the package per clients' request.



## GU-500 400ML TECHNICAL DATA SHEET

### INSTALLATION INSTRUCTIONS

1. Drill hole using correctly sized rotary hammer drill bit to the specified depth.



2. Blow out dust with clean air.



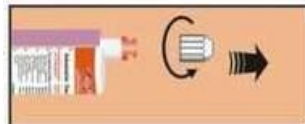
3. Clean hole with cleaning brush with stiff nylon or wire bristles.



4. Blow out remaining dust.



5. Open top of cartridges.



6. Take off red stopper from top.



7. Use Good Use nozzles after remove red stopper from the cartridge and attach the mixing nozzles, please screw down tight.



8. Please assemble cartridge into the caulking gun.



9. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until color is red with no streaks.





## GU-500 400ML TECHNICAL DATA SHEET

10. Open the valve. Squeeze the handle so the mortar is dispensed out of the nozzle until an even, uniform orange color is achieved. Before a new cartridge is introduced into the hole, dispense the first 10ml or so to waste until mix is even on color(orange) as well. Because initial flow should be disposed of into empty packaging or similar materials. Inject resin into hole, starting from the bottom of hole. The mortar must be injected without creating air pockets.



11. Insert studs or anchors, push the stud into the hole using a slow twisting motion. Wipe away the excess material. Anchor or stud need to be clean and oil-free.



12. Please do not touch studs or anchor until mixture has gelled and do not load the anchor until curing is complete as per chart 1. curing time table.



**CHART 1. CURING TIME TABLE**

Temperature (°C)	Gelling Time	Full Curing Time
5 ~ 10	1 - 2 hr.	90 - 100 hr.
10 ~ 20	30 - 60 min.	30 - 60 hr.
20 ~ 30	14 - 30 min.	14 - 22 hr.
30 ~ 40	10 - 20 min.	6 - 12 hr

Please make pull out test over 24 hours after full cured. Kindly reminding temperature below 15°C the mortar must be conditioned to a minimum of 15°C.



**GU-500 400ML  
TECHNICAL DATA SHEET**

**CHART 2. SOLID SUBSTRATE REBAR INSTALLATION DETAILS**

Pressure			Destroy Haul Strength (Kgf / KN)		Safety Haul Strength (Kgf / KN)		Working Standard (mm)	
Concrete Strength			4,000 psi	280 kg/cm2	4,000 psi	280 kg/cm2	Hole Diameter	Hole Depth
REBAR No.	#3	10Ø	3,607	36.4	1,202	12.1	13	90
	#4	12Ø	6,409	64.7	2,136	21.6	16	125
	#5	16Ø	9,695	97.9	3,232	32.6	20	145
	#6	20Ø	13,655	137.9	4,552	46.0	25	170
	#7	22Ø	18,672	188.6	6,224	62.9	28	200
	#8	25Ø	24,032	242.7	8,011	80.9	32	225
	#9	28Ø	27,364	276.4	9,121	92.1	37	260
	#10	32Ø	31,730	320.5	10,577	106.8	40	290
#11	36Ø	35,843	362.1	11,948	120.7	42	320	

Remarks: 1. Concrete Strength  $f_c'$ : 280kg/cm2 (4,000 psi)  
2. Thread Rod Strength: #3~#5  $f_y$ : 2,800 kgf/cm2, #6~#11  $f_y$ = 4,200 kgf/cm2

**CHART 3. REBAR EDGE DISTANCES AND TESTING**

EDGE DISTANCE REDUCTION FACTOR									
TENSILE LOAD									
SPACING	REBAR								
	CONCRETE 4000psi/27.5Mpa								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
40	0.65								
50	0.66	0.62							
60	0.69	0.66	0.64						
70	0.72	0.69	0.65						
80	0.75	0.71	0.67	0.64					
90	0.78	0.74	0.69	0.65					
100	0.81	0.76	0.71	0.66	0.64				
125	0.88	0.82	0.76	0.70	0.67	0.64			
150	0.95	0.89	0.81	0.74	0.70	0.66	0.64		
160	1.00	0.91	0.83	0.75	0.72	0.67	0.65	0.65	
175		0.95	0.86	0.77	0.73	0.69	0.66	0.66	0.65
225		1.00	0.91	0.81	0.79	0.75	0.72	0.69	0.67
240			0.96	0.85	0.81	0.76	0.73	0.72	0.68
250			1.00	0.87	0.83	0.77	0.74	0.73	0.69
275				0.88	0.85	0.78	0.76	0.74	0.71
280				0.92	0.85	0.79	0.76	0.75	0.73
300				0.94	0.89	0.82	0.79	0.77	0.75
320				1.00	0.91	0.84	0.81	0.79	0.77
350					0.95	0.87	0.84	0.82	0.79
400					1.00	0.93	0.89	0.83	0.82
440						0.97	0.93	0.85	0.84
480						1.00	0.95	0.91	0.86
500							0.97	0.95	0.91
525							1.00	0.97	0.94
550								1.00	0.97
570									1.00



**GU-500 400ML  
TECHNICAL DATA SHEET**

Note: The required specification(s) offered in this report are for reference only. The conformity judgement is at the Applicant's final verified.

**CHART 4. SOLID SUBSTRATE THREAD ROD INSTALLATION DETAILS**

Pressure		Destroy Haul Strength (Kgf / KN)		Safety Haul Strength (Kgf / KN)		Working Standard		
		4,000 psi	280 kg/cm2	4,000 psi	280 kg/cm2	Edge Spacing (cm)	Hole Diameter (mm)	Hole Depth (mm)
Thread Rod No.	M8	2,338	23.6	779	7.9	5	10	80
	M10	3,133	31.6	1,044	10.5	6	12	90
	M12	4,495	45.4	1,498	15.1	7	14	110
	M16	6,595	66.6	2,198	22.2	7	18	125
	M20	11,958	120.8	3,986	40.3	9	24	170
	M24	17,352	175.3	5,784	58.4	13	28	210
	M30	28,473	287.6	9,491	95.9	16	35	270
	M36	39,170	395.7	13,056	131.9	19	40	330

**CHART 5. THREAD ROD EDGE DISTANCES AND TESTING**

EDGE DISTANCE REDUCTION FACTOR								
TENSILE LOAD								
EDGE DISTANCE(MM)	THREAD ROD							
	CONCRETE 4000psi/27.5Mpa							
	M8	M10	M12	M16	M20	M24	M30	M36
40	0.65							
50	0.74	0.64						
60	0.83	0.71	0.64					
70	0.91	0.78	0.69					
80	1.00	0.85	0.75	0.64				
90		0.92	0.81	0.68				
100		1.00	0.87	0.73	0.65			
110			0.93	0.78	0.67			
120			1.00	0.82	0.71	0.65		
140				0.92	0.79	0.68	0.64	
160				1.00	0.86	0.74	0.67	0.65
180					0.94	0.81	0.73	0.68
200					1.00	0.87	0.79	0.74
220						0.93	0.85	0.78
240						1.00	0.91	0.86
265							1.00	0.92
280								1.00

Note: The required specification(s) offered in this report are for reference only. The conformity judgement is at the Applicant's final verified.



---

## GU-500 400ML TECHNICAL DATA SHEET

---

**CHART 6. FIXINGS PER CARTRIDGE**

Anchor Size	Hole Diameter (mm)	Hole Depth (mm)	Number of Fixings
			400ML
M8	10	80	80
M10	13	90	42
M12	16	120	21
M16	20	145	11
M20	25	170	6
M24	28	210	4
M30	35	270	2
M36	40	330	1

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

### 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 Good Use products can not 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.