



GU-500SD 400ML TECHNICAL DATA SHEET

PRODUCT

Good Use GU-500SD 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-500SD is designed for bonding threaded rod and reinforcing bar hardware into drilled holes in concrete base and solid masonry materials.

PRODUCT CODE

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

DESCRIPTION

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

APPLICATION

- Fixing machines, hardrails, 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 odorless and non-toxic.
- Expansion free and shrinkage free.
- Higher property for varied weather.
- Wide temperature range(5°C~+40°C)
- Styrene free.



**GU-500SD 400ML
#818 MIXER**



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ATTENTION

- Do not install anchors when substrate temperature is less than 0°C.
- Do not install anchors when the GU-500SD mortar temperature is less than 15°C.
- At temperatures below 15°C GU-500SD should be warmed or stored in temperatures of 15-40°C for 24hours 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.
- Not suitable for use in diamond cored holes without roughening.
- 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 CAULKING GUN



#819 NYLON SLEEVE

STORAGE/SHELF LIFE

- 18 months after the manufactured day in dry and dark environment with temperature ranging from 10°C~40°C.
- Avoid direct sunlight.

PACKAGING INFORMATION

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



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INSTALLATION INSTRUCTIONS

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



2. Blow out dust with clean air.



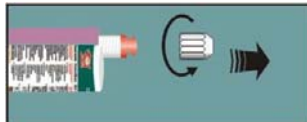
3. Clean hole with cleaning brush with stiff nylon or wire bristles.



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.



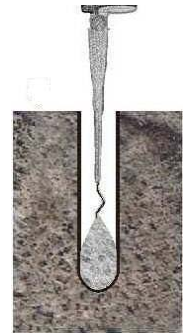
9. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until color is dark green with no streaks.





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

10. Open the valve. Squeeze the handle so the mortar is dispensed out of the nozzle until an even, uniform dark green 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 (dark green) 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 - 9	2 hr.	90 hr.
10 - 14	90 min.	64 hr.
15 - 19	45 min.	28 hr.
20 - 29	30 min.	18 hr.
30 - 39	20 min.	7 hr.
40	12 min.	5 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

CHART 2. SOLID SUBSTRATE REBAR INSTALLATION DETAILS



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

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	3,622	36.6	1,207	12.2	13	90
	#4	12Ø	6,437	65.0	2,146	21.7	16	125
	#5	16Ø	9,737	98.4	3,246	32.8	20	145
	#6	20Ø	13,715	138.5	4,572	46.2	25	170
	#7	22Ø	18,754	189.4	6,251	63.1	28	200
	#8	25Ø	24,137	243.8	8,046	81.3	32	225
	#9	28Ø	27,484	277.6	9,161	92.5	37	260
	#10	32Ø	31,869	321.9	10,623	107.3	40	290
	#11	36Ø	36,000	363.6	12,000	121.2	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

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



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TECHNICAL DATA SHEET**

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	2,348	23.7	783	7.9	5	10	80
	M10	3,164	32.0	1,055	10.7	6	13	90
	M12	4,973	50.2	1,658	16.7	7	16	120
	M16	6,624	66.9	2,208	22.3	7	20	145
	M20	12,010	121.3	4,003	40.4	9	25	170
	M24	17,428	176.0	5,809	58.7	13	28	210
	M30	28,730	290.2	9,577	96.7	16	35	270
	M36	39,565	399.6	13,188	133.2	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.



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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.