



AB500 - Concrete Anchor Epoxy

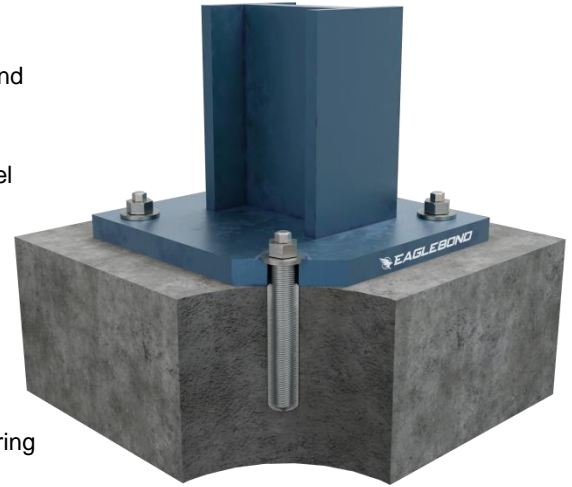
AnchorBond500 concrete anchoring epoxy is primarily used for the post-installation of anchor bolts. It features an epoxy agent with strong adhesive properties for bonding and securing loads to concrete by using rebar, bolts, rods, and dowels. This epoxy solution offers exceptionally high and ultimate bonding strength. It is the ideal choice for heavy loads, vibration resistance, and harsh environmental conditions.

Advantages and Benefits

- ✓ Performance equivalent to top leading brands for injectable epoxy
- ✓ High Performance / High strength / Strong Cohesion / Good Toughness
- ✓ Excellent thixotropy - Can be used for side and overhead fixings
- ✓ Pure modified epoxy resin, no styrene
- ✓ Aging resistance / Thermal and Heat resistance / Moisture resistance
- ✓ Acid & alkali resistance / Seismic resistance, no expansion forces
- ✓ Stable in humid and damp environment
- ✓ Can be used for cracked and uncracked concrete
- ✓ Adjustable range of embedment depths
- ✓ Can be used for anchoring to hollow blocks

Application Range

- ✓ Installation and fixing of steel bars and bolts in concrete structure
- ✓ Anchoring structural connection for slab, columns, beams, and other steel products
- ✓ Fix load using threaded rod to serve as anchor bolt reinforcement for curtain wall & bracket fixings
- ✓ Building structure reinforcement & framework anchoring
- ✓ Retrofitting solution for structural buildings and other structural anchoring requirements
- ✓ Fastening solution for various machine equipments
- ✓ Reinforcement solution for highways, bridges, water conservancy projects and the likes



Substrate for Anchoring

Approved for use with post-installed threaded rod and rebar connection to cracked and non-cracked concrete with class C20/25 to C50/60

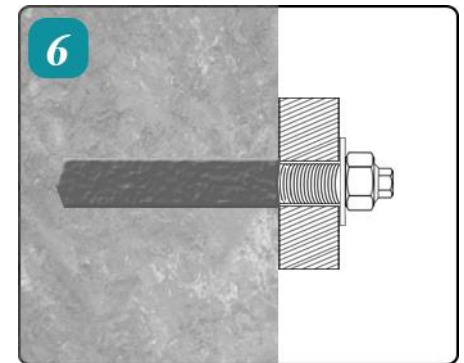
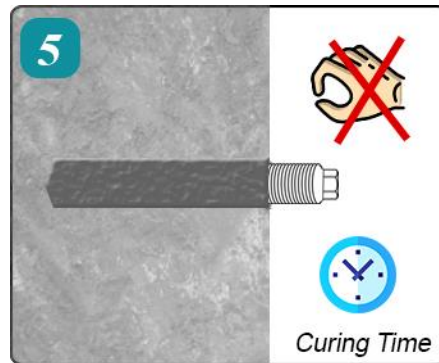
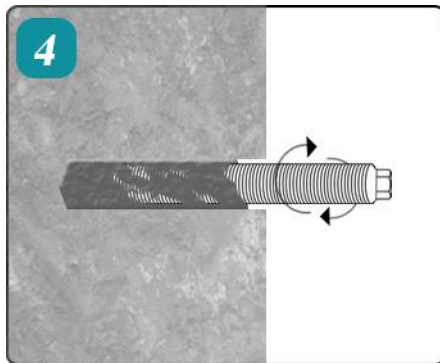
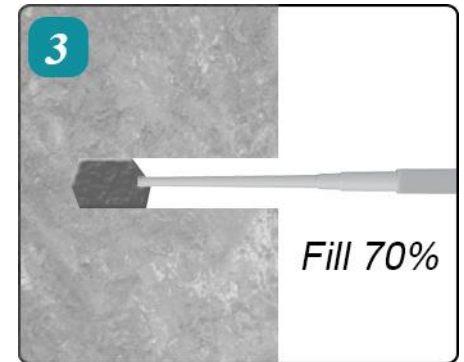
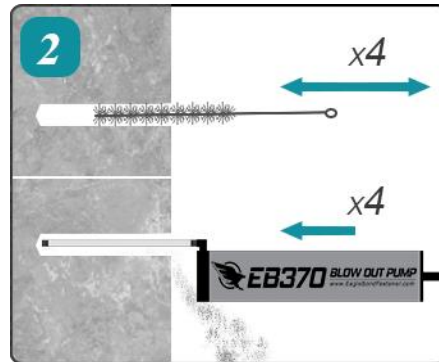
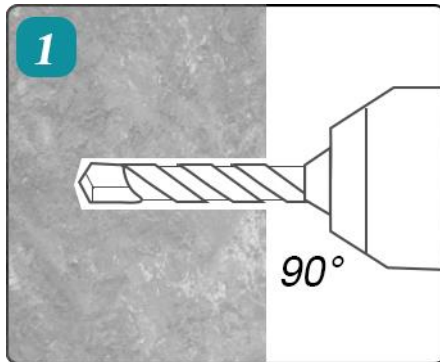




Operable Time and Curing Time

Ambient Temperature (°C)	-5°C	0°C	15°C	≥25°C
Operable Time (min)	120	60	45	25
Curing Time (h)	72	48	24	12

Installation Guide



Step 1: Hole Drilling - Drill the hole according to the specified diameter and anchoring depth provided in the technical data sheet to ensure that the anticipated load strength requirements are met..

Step 2: Hole Cleaning - Ensure that the drilled hole is properly cleaned before injecting the chemical adhesive to avoid compromising the strength of the bond. Use steel brush and EB370 Industrial Blow Out Pump to clean debris and repeat the cleaning process at least 4 to 5 times.

Step 3: Injecting Chemical Adhesive - EagleBond AB500 Concrete Epoxy features a specialized static mixer and dispenser. It is advisable to inject approximately 70% or 2/3 of the adhesive volume relative to the hole's depth.

Step 4: Installation - It is recommended to use markers on the steel bar or threaded rod to indicate the appropriate depth for embedding the anchor. Gently and steadily insert the steel bar or threaded rod in a single direction until it reaches the bottom of the drilled hole.

Step 5: Curing Time - During curing time, Avoid moving the steel bar or bolt and refrain from applying load.

Step 6: Load installation - For recommended safety load, Please check the Anchoring Load Capacity Chart.



Shelf Life	Minimum of 24 Months shelf life when stored in unopened containers under proper & dry conditions
Storage	Store the items in their original packaging, in a cool environment with temperatures ranging from 5°C to 25°C, and away from direct sunlight
Package	390ml - 20pcs / carton

Material Specifications

Tensile Strength (ASTM D638)	≥55 MPa	≥7977 psi
Compressive Strength (ASTM D695)	≥82 MPa	≥12,000 psi
Compressive Modulus (ASTM D695)	≥3500 MPa	-
Bending Strength	≥50MPa	≥7252 psi
Splitting Strength	≥8.5MPa	≥1233 psi
Elongation at Break (ASTM D638)	1.4%	-
Deflection Temperature (ASTM D648)	≥65°C	-
Viscosity of Mixture	18-22Pa•S	-
Density after Curing	1.5±0.1g/cm ³	-
Thixotropy Index	≥4.0	-

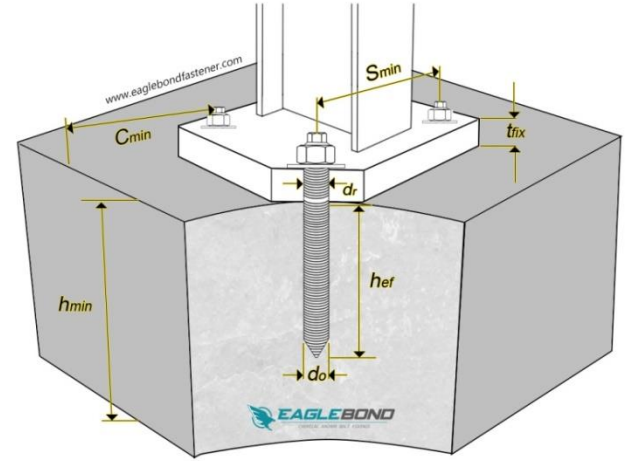
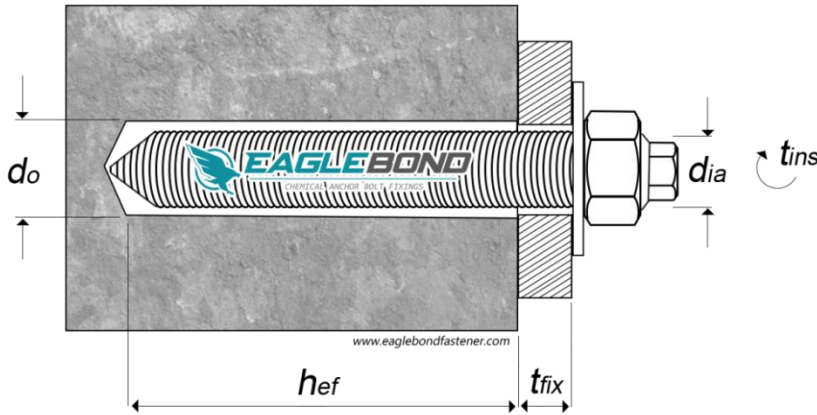
Chemical Resistance

Chemical Substances	Concrete admixtures
	Diesel oil
	Petrol
	Construction solvents
	Concrete form release oil
	Marine environment water
	Deionized water
	Salt spray corrosion test
	Environmental Substances
Alkaline	Concrete drilling mud
	Concrete potash solution
Solvents	Xylene (mixture)

Estimated Fixings Per Epoxy Tube

Diameter(mm)	Hole Dia(mm)	Depth(mm)	Fixings(pcs)
M8	10	80	80
M10	12	90	50
M12	14	110	30
M16	18	125	20
M20	24	170	10
M24	28	210	6
M30	34	260	3
M36	40	330	1

Note: The accuracy of this estimation chart table is subject to variations based on the specific settings of the drilled hole, anchoring depth, and the uniformity of application.



Settings Guide for Anchor Rod

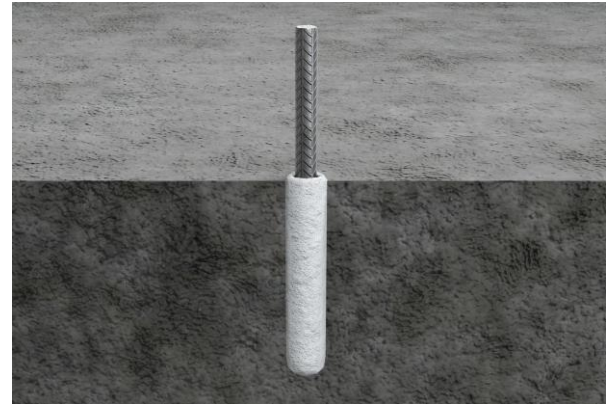
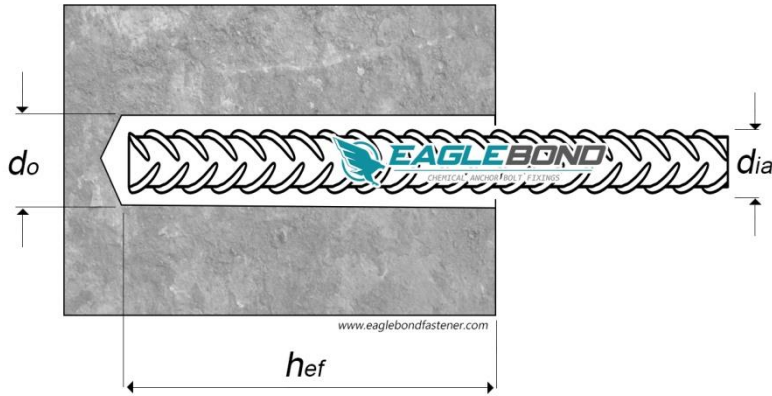
Diameter	dia		M8	M10	M12	M16	M20	M24	M30
Hole Diameter	do	mm	10	12	14	18	24	28	35
Anchoring Depth	hef	mm	80	90	110	125	170	210	280
Max Torque	T _{ins}	Nm	10	20	40	60	120	150	300
Minimum Thickness of Concrete	h _{min}	mm	110	120	140	160	220	260	350
Minimum Spacing for Bolt	S _{min}	mm	40	45	55	65	85	105	140
Minimum Edge Distance	C _{min}	mm	40	45	55	65	85	105	140
Fixture Hole Diameter	dr	mm	9	12	14	18	22	26	33
Fixture Max Thickness	t _{fix}	mm	20	25	30	40	55	65	70

Recommended Safety Load & Permissible Load for C20/25 Concrete Class

Non-Cracked Concrete	Bolt Grade		M8	M10	M12	M16	M20	M24	M30
Tension	G4.8	kN	10.0	13.5	20.5	32.8	41.0	61.5	82.8
Shear	G4.8	kN	7.5	9.0	14.3	27.0	37.6	54.5	78.0
Tension	G8.8	kN	10.3	14.2	21.2	34.3	48.5	66.5	87.8
Shear	G8.8	kN	10.4	13.3	22.1	42.8	59.4	79.7	101.0
Tension	SS304	kN	10.1	13.7	20.9	34.3	46.5	63.5	86.3
Shear	SS304	kN	9.6	10.5	15.8	29.3	39.4	58.2	80.0
Cracked Concrete	Bolt Grade		M8	M10	M12	M16	M20	M24	M30
Tension	G4.8	kN	6.2	8.2	9.5	11.5	20.3	26.0	36.8
Shear	G4.8	kN	5.3	7.8	11.5	19.0	29.0	44.9	72.0
Tension	G8.8	kN	6.4	8.5	10.9	12.8	22.8	29.5	37.4
Shear	G8.8	kN	8.2	10.9	19.6	35.5	44.0	62.7	91.5
Tension	SS304	kN	6.3	8.4	9.8	12.6	21.4	26.3	37.4
Shear	SS304	kN	5.4	8.9	11.7	19.2	32.0	45.7	72.5

Note: The Safety Load Estimation typically represents approximately one-half to one-third of the actual Ultimate Strength

*Increasing the diameter and anchoring depth of the drilled hole will proportionately increase the recommended safety load



Recommended Safety Load & Permissible Load for Rebar (Grade 60)

Diameter	dia	M8				M10				M12				M16				M20				M25				M30			
Hole Diameter	do	12 mm	12 mm	12 mm	12 mm	14 mm	14 mm	14 mm	14 mm	16 mm	16 mm	16 mm	16 mm	20 mm	20 mm	20 mm	20 mm	25 mm	25 mm	25 mm	25 mm	32 mm	32 mm	32 mm	32 mm	38 mm	38 mm	38 mm	38 mm
Anchor Depth	hef	60 mm	70 mm	95 mm	160 mm	60 mm	90 mm	120 mm	200 mm	70 mm	110 mm	145 mm	240 mm	80 mm	145 mm	195 mm	320 mm	90 mm	180 mm	240 mm	400 mm	100 mm	225 mm	300 mm	500 mm	120 mm	250 mm	340 mm	560 mm
Non Cracked Concrete	Concrete Class	M8 (kN)				M10 (kN)				M12 (kN)				M16 (kN)				M20 (kN)				M25 (kN)				M30 (kN)			
Tension	C25	9.0	10.8	14.2	24.0	11.5	16.7	22.5	36.3	15.5	24.5	32.1	52.7	23.4	39.5	55.3	89.3	28.7	61.3	79.8	133.0	33.8	89.9	121.8	202.8	42.5	114.7	150.6	250.4
Shear	C25	9.5	23.5	30.5	52.4	12.0	36.2	48.4	78.4	33.9	52.5	69.5	114.7	47.5	86.3	115.4	193.0	59.5	128.9	172.1	285.6	71.0	195.2	262.3	435.8	85.0	242.4	317.8	535.8
Tension	C30	9.2	10.8	14.7	24.5	12.0	17.8	22.9	37.0	16.2	24.7	32.9	53.8	23.9	41.5	56.0	90.3	30.2	61.9	80.9	135.8	34.6	91.0	124.1	204.1	44.2	117.7	154.3	258.5
Shear	C30	9.7	23.9	31.5	51.4	12.2	36.7	49.2	82.8	35.5	53.5	70.8	116.8	49.9	87.9	117.6	196.6	66.5	133.2	174.3	292.9	75.8	198.8	264	440.7	91.9	248.8	328.7	545.5
Tension	C40	9.5	11.1	15.2	24.0	12.4	18.0	23.4	38.1	16.4	25.4	33.6	56.2	24.6	42.9	56.9	93.4	31.4	62.8	85.3	139.6	40.0	94.0	126.8	212.1	49.7	120.0	158.7	264.8
Shear	C40	10.2	24.5	32.5	52.9	12.6	37.8	50.3	85.2	36.8	54.7	72.9	120.3	51.8	90.5	121.0	202.5	68.8	135.1	182.5	301.4	87.5	205.6	272.9	455.6	105.0	255.9	339.2	566.3
Tension	C50	9.7	11.6	15.6	24.6	12.9	18.5	25.0	41.2	16.8	26.5	34.4	57.4	25.3	44.5	57.8	97.7	33.3	65.6	87.2	144.6	44.2	97.0	128.5	214.8	55.7	125.6	162.5	273.6
Shear	C50	10.5	24.9	33.5	55.7	12.8	38.7	52.7	85.5	37.0	55.9	75.4	123.0	53.0	92.7	125.8	209.0	69.9	138.5	186.6	308.3	94.0	208.2	277.9	465.9	115.6	260.5	350.7	587.8
Cracked Concrete	Concrete Class	M8 (kN)				M10 (kN)				M12 (kN)				M16 (kN)				M20 (kN)				M25 (kN)				M30 (kN)			
Tension	C25	-	-	-	-	4.3	6.0	8.3	13.9	5.8	9.2	12.1	20.1	9.2	15.8	21.8	34.8	12.8	25.5	33.5	56.1	17.5	38.3	51.9	83.8	19.8	44.8	60.8	99.9
Shear	C25	-	-	-	-	4.4	13.5	18.2	30.2	12.8	18.5	26.0	43.4	18.0	33.7	46.2	76.1	27.5	54.1	72.2	120.4	36.4	82.3	108.6	181.6	43.2	92.6	129.9	215.8
Tension	C30	-	-	-	-	4.4	6.3	8.6	14.5	6.1	9.3	12.3	20.5	9.3	16.2	22.0	35.5	12.9	25.7	34.1	57.1	17.8	38.8	52.8	85.4	20.5	45.8	61.9	105.6
Shear	C30	-	-	-	-	4.4	13.7	18.3	30.8	12.9	18.9	26.5	44.2	19.2	35.5	47.2	77.6	27.8	55.3	73.6	122.0	37.3	83.8	110.6	185.0	44.7	97.4	132.2	220.7
Tension	C40	-	-	-	-	4.5	6.3	8.7	14.8	6.3	9.6	12.7	21.7	9.7	16.8	22.6	36.5	13.5	26.2	35.1	58.8	17.9	40.2	53.4	87.9	21.9	48.0	64.7	106.5
Shear	C40	-	-	-	-	4.6	14.1	19.0	32.6	13.5	21.5	27.3	45.5	20.0	36.8	48.7	80.9	28.5	56.8	75.7	126.0	38.5	86.2	113.9	190.4	45.0	100.3	134.1	224.1
Tension	C50	-	-	-	-	4.9	6.6	8.9	15.2	6.4	9.6	13.0	21.6	9.9	16.9	23.1	37.4	13.8	27.2	36.3	60.0	18.4	40.8	54.5	89.9	22.4	49.1	65.1	107.9
Shear	C50	-	-	-	-	4.9	14.2	19.2	33.4	13.9	21.9	27.9	46.5	20.2	37.9	49.4	83.7	29.3	58.2	77.4	129.5	39.6	88.2	116.4	194.7	46.5	102.6	139.1	231.2

Note: The Safety Load Estimation typically represents approximately one-half to one-third of the actual Ultimate Strength
*1 kilonewton (kN) is approximately equal to 101.97 kilograms (kg)