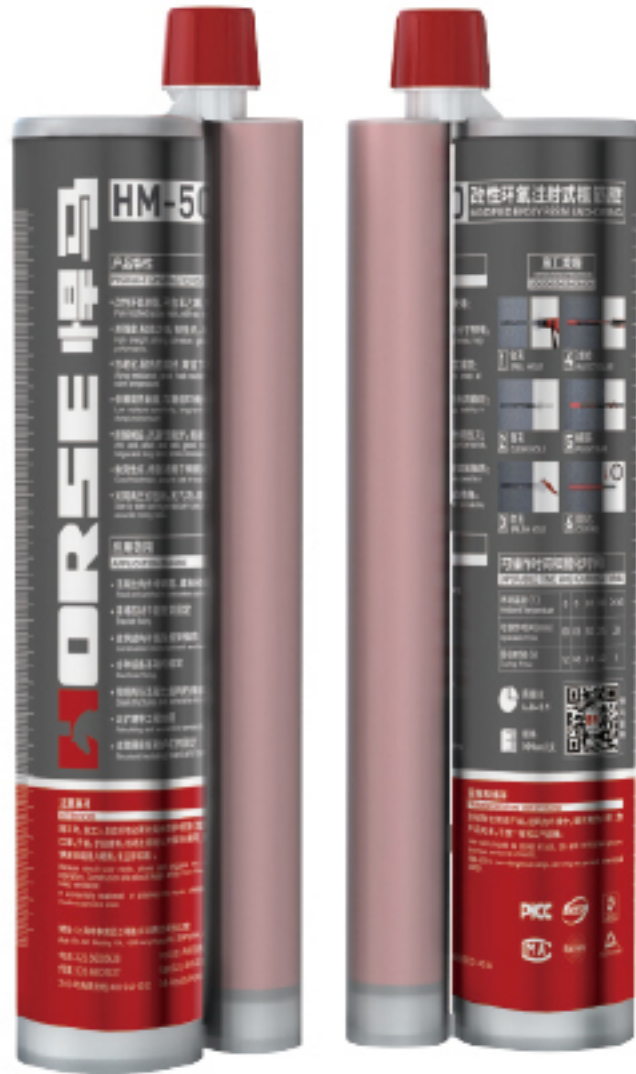


# Epoxy Resin Anchoring



Epoxy resin anchoring HM-500 is a two-component modified epoxy resin adhesive, supplied in high quality double cartridge plastic tube package. It is injected into holes using dispenser gun, which ensures mixing part A and part B uniformly before discharging the adhesive. The primary application of HM-500 epoxy resin anchoring is planting reinforcing bars and other starter bars.



## ▲▲Product Advantage

- The modification of epoxy resin not only keeps the synthetic superiority of colloid, but also shortens the curing time at low temperature.
- The colloid is full of elastic reactive spherical body, which improves the strength, toughness, tearing resistance and impact resistance of the adhesive.
- Successful grafting of hydrophilic groups and hydrophobic groups on molecular structure to maintain superior performance in dry or moist environment.
- Advanced high-speed dual-planetary power mixing equipment, materials dispersed mixed uniformly, and has vacuum treatment to avoid introducing bubbles. The adhesive has more stable performance, longer storage life-time, has denser colloid curing, and more superior mechanical properties.
- The use of nano-materials technology, multi-dimensional network structure to achieve good thixotropic effect. Whether vertical-side application or ceiling overhead application, the glue has no flow hanging phenomenon.
- Low viscosity, easy extrusion mixing, faster injection speed, higher construction efficiency.
- With the HM special electric glue gun, the construction efficiency increases 100%, the labor-time reduced by 50%.
- The product has passed the safety appraisal test, the environmental protection non-toxic detection, the horizontal combustion detection, the two amine detection inspection, the acute mouth toxicity test, the welding resistance test (embedding bond test), the anchorage system anti-fatigue test, and the acute through mouth toxicity test.

## ▲▲ Technical Parameters

### Mechanical Properties

Item	HM-500 Epoxy Resin Anchoring				
Appearance	Part A: White paste				
	Part B: Red paste				
Density (g/cm <sup>3</sup> )	1.50±0.10				
Mix Ratio	A:B=3:1				
Temperature (°C)	-5	0	10	20	≥30
Time of Operate (min)	60	45	30	25	20
Cure Time (h)	72	48	24	12	6
Shelf Life (month)	18				

### Performance Parameter

Description	Test Item	Test Conditions	Test Result
Adhesive Performance	Tensile Strength (MPa)	ASTM D638	55
	Tensile Modulus (MPa)		3500
	Elongation at Break (%)		1.7
	Flexural Strength (MPa)	ASTM D790	70
	Compressive Strength (MPa)	ASTM D695	82
	Shear Strength (MPa)	ASTM D732	45
	Deformation Temperature (°C)	B method using 0.45MPa bending stress	≥65
	Nonvolatile matter Content (%)	(105±2) °C, (180±5) min	≥99



Test Item		Test Conditions	Qualified Standard (GB50728-2011)
Conditions Resistance	Wet and Heat Ageing Resistance	Under 50°C、95% RH conditions, ageing 90 days, testing at ambient temperature by steel-steel tensile shear strength	Compared with the short-term results at roomtemperature, shear strength loss: $\leq 12\%$
	Heat Aging Resistance	Under $(80 \pm 2)$ °C conditions, ageing 30 days, testing as the same temperature by steel-steel tensile shear strength	Compared with the short-term results at same temperature 10min, shear strength loss: $\leq 5\%$
	Freezing and Thawing Resistance	Under-25°C-35°C freezing circulating temperature, circulate 8h every time, after 50 times, testing at ambient temperature by steel-steel tensile shear strength	Compared with room temperature, short-term results, shear strength loss is not greater than 5%
Stress Resistance	Performance Under Sustained Load	Under $(23 \pm 2)$ °C, $(50 \pm 5)$ % RH conditions, undertake 4.0MPa shear strength continuous to 210d	Steel - steel tensile shear specimens does not fail, and creep deformation value is less than 0.4 mm
	Fatigue Performance	Under ambient temperature, as frequency 5Hz, stress ratio 5:1.5, max stress 4.0MPa fatigue load testing by steel-steel tensile shear strength	After $2 \times 10^6$ times continuous sine wave fatigue loads, specimen does not fail

→→ Application guider of HM-500 for rebar planting

The steel bar diameter (mm)	Pore size (mm)	Pore depth (mm)	The injecting glue volume ml(2/3v)	Theoretic number piece	HRB335 (kN)	Depth
8	12	80	6.03	64	15.08	10d
8	12	120	9.04	43		15d
8	12	160	12.06	32		20d
10	14	100	10.26	38	23.56	10d
10	14	150	15.08	25		15d
10	14	200	20.52	19		20d
12	16	120	16.09	24	33.93	10d
12	16	180	24.12	16		15d
12	16	240	32.18	12		20d
14	18	140	23.73	16	46.18	10d
14	18	210	35.61	10		15d
14	18	280	47.46	8		20d
16	22	160	40.52	11	60.32	10d
16	22	240	60.79	7		15d
16	22	320	81.04	5		20d
18	25	180	58.87	8	76.34	10d
18	25	270	88.31	5		15d
18	25	360	117.74	4		20d
20	28	200	82.06	5	94.25	10d
20	28	300	123.09	3		15d
20	28	400	164.12	2		20d
22	30	220	103.62	4	114.04	10d
22	30	330	155.43	2		15d
22	30	440	207.24	2		20d
25	32	250	133.97	2	147.26	10d
25	32	375	200.96	1		15d
25	32	500	267.95	1		20d



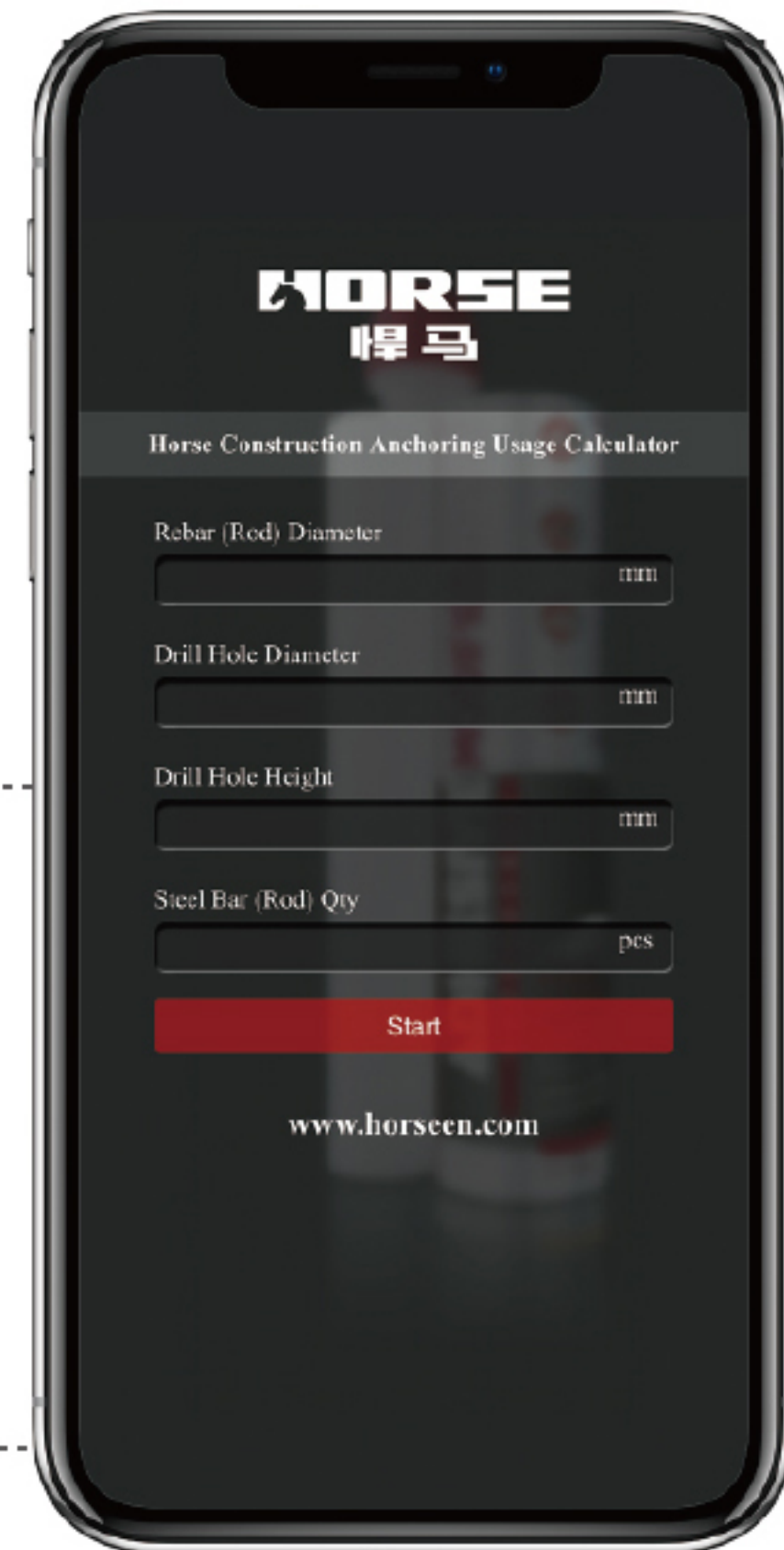


▲▲ Operation Process

Please scan QR code to view a 3D video



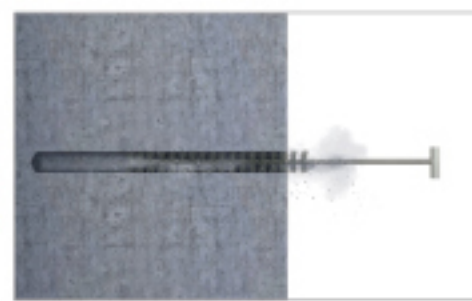
Glue Dosage Calculator



▲▲ Operation Process



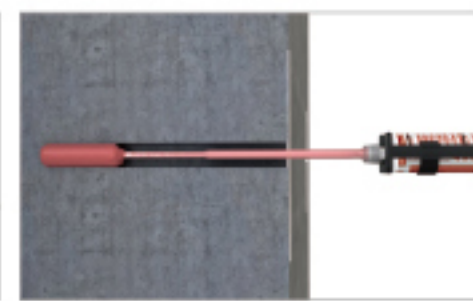
drill hole



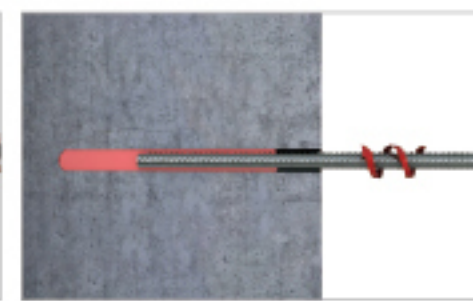
clean hole



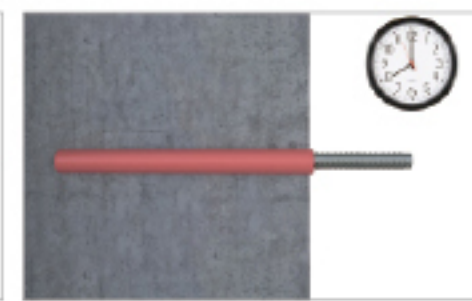
blow hole



inject glue

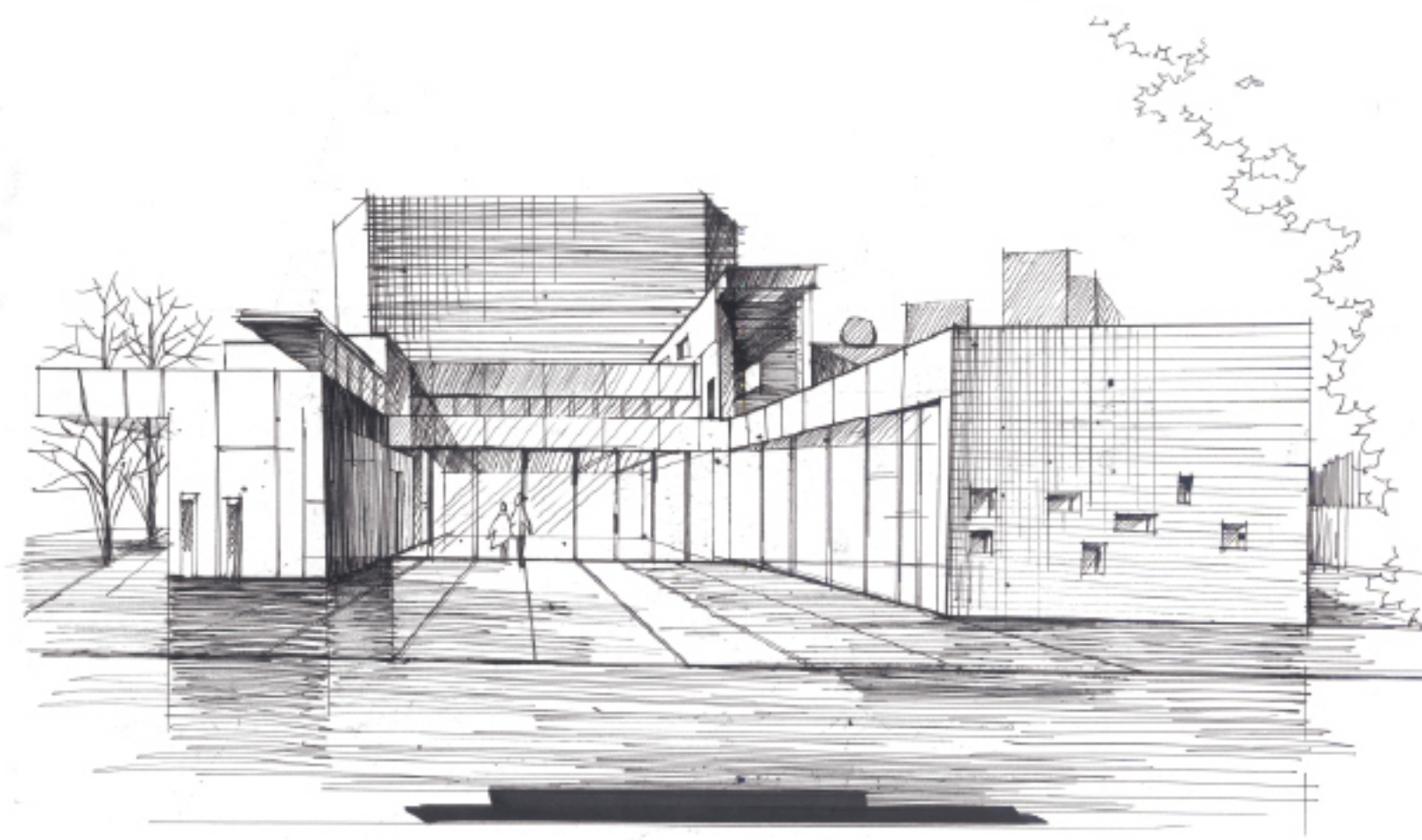


plant rebar



curing





### ▲▲Product Characteristics

- Modified epoxy resin, styrene-free, safe and non-toxic.
- High strength, strong bond strength, good toughness, the effect is equivalent to rebar embedded in new concrete.
- Durable, good heat resistance, no creep at room temperature.
- Low sensitivity to humidity, long-term load stability in humid environment.
- Anti-acid-base, good seismic performance, no expansion.
- The thixotropic properties are good, especially suitable for the vertical-side or ceiling overhead surface bar planting applications.
- Dual-barrel straight mixing package, with special glue gun for mixing and dispensing, no need for manual dispensing.
- Short curing time, could cure at low temperature.

### ▲▲Application Range

- Planting of steel bars and bolts in concrete' s frame member.
- Fixation of drying hanging brackets of curtain walls and stone materials.
- Reinforcement of building structures and the anchorage for framework.
- Planting anchor-bolts for all types of equipment.
- Anchoring connection of steel structures and concrete structures.
- Engineering reinforcement of railways, public roads, bridges, water conservancy facilities' reconstruction and extension, etc..
- Fixation of advertisement boards, tunnel pipe lines, elevated road noise barriers and barricades.

### ▲▲Storage transport

- Should be stored in a cool, dry well-ventilated space. Storage time period is limited to 18 months.
- According to General Chemical Building Materials Transport, this product is non-toxic, and non-hazardous product.

### ▲▲Package

Supplied in hard plastic tube cartridges, 390ml/cartridge, 30cartridges/box.

### ▲▲Safety Measures

- Users of this product should take safety protection measures (e.g. wearing masks, gloves, goggles, etc.).  
Fire prevention measures should also be taken, and the work space should be well-ventilated.
- If accidentally swallowed or splashed into the eye, please seek immediate medical attention.