

HM-120

High Performance Steel Plate Bonding Epoxy Adhesive

Description	HM-120 steel plate bonding epoxy is double component epoxy based adhesive with strong bonding strength, shear strength. It is used for seismic reinforcement of buildings and structures.
Application Range	The reinforcement of all kinds of building structures, wall floor, beam, columns and other steel plate application.
Product Characteristics	<ul style="list-style-type: none">■ Double component bisphenol-A modified epoxy resin based adhesive■ Good aging resistance and medium resistance, humidity resistance and chemical corrosion resistance■ Good physical performance after curing, strong toughness and have certain degree of elasticity.■ Suitable for almost all building substrates.
Product Characteristics	<ul style="list-style-type: none">■ Good thixotropy, the static stack height can reach 2-3 cm, non sagging, easy to operate, lower hollow area, avoid waste and rework.■ Unique island structure toughening system, superior bonding strength, good fatigue resistance. No stripping or tearing damage.■ Successful grafting of hydrophilic groups and hydrophobic groups in the molecular structure. Superior performance in both dry and humid conditions.■ Moderate curing time, enough operation time, no need to hurry.■ Advanced high speed dual planetary power mixing equipment. The raw material is mixed evenly. And by vacuum treatment, there is no bubble. More stable property, longer shelf life.■ High percentage of effective ingredient, low density, save at least 30% glue usage amount.

Shelf Life

When stored at room temperature(25°C), the shelf life will be at least 12 months from the date of manufacture.

Storage Conditions

This product should be sealed and stored in dry and clean storehouse. Storage temperature is -5°C to 40°C.

Technical Parameters

Appearance	Component A: Grey putty	Ultimate elongation (%)	≥1.2
	Component B: Brown putty	Mixture ratio	A:B=2:1
Thixotropic Index		≥4.0	
Viscosity of mixture		≥20Pa*s	
Density after curing		1.8g/cm ³	
Operable time (25°C)		30min	
Touch dry time (25°C)		2h	

Mechanical Properties

Colloidal performance	Compressive strength(MPa)	≥65
	Tensile strength(MPa)	≥30
	Bending Strength(MPa)	≥45
	Elastic strength(MPa)	≥3200
Bonding capacity	Steel-steel tensile shear strength(MPa)	≥15
	Steel-steel non-uniform tear strength(MPa)	≥16
	Steel-steel bonding strength(MPa)	≥33
	Steel-steel T impact stripping length (mm)	≤25
	Steel-concrete bonding strength(MPa)	C60 concrete damage

Long-term performance

Long-term performance	Wet and heat ageing	Compared with the short-term results at room temperature,
		the decrease rate of shear strength: $\leq 12\%$
	Heat aging resistance	Compared with the short-term results at same temperature 10min,
		the decrease rate of shear strength: $\leq 5\%$
	Freezing and thawing	Compared with room temperature, short-term results,
		the shear strength decrease rate is not greater than 5%
Fatigue stress	After 2×10^6 times continuous sine wave fatigue loads,	
	specimen does not destroy	
Resistance to stress	Steel - steel tensile shear specimens does not destroy,	
	and creep deformation value is less than 0.4 mm	
Resistance to corrosion medium	Resistance to salt	Compared with the control group, the strength decrease rate: $\leq 5\%$,
		and shall not have cracks or come unglued
	Alkaline medium	Compared with the control group, the strength does not decrease,
and as the concrete damage, and shall not have cracks or come unglued		
Acid medium	Concrete damage, and shall not have cracks or degumming	

Construction Process

1. Substrate surface clean
2. Scribe line ro setting out
3. Anchoring
4. Plate surface preparing
5. Bonding steel plate with the structural adhesive
6. Maintaince
7. Checking
8. Protection coating

Points for Attention The construction workers should take necessary protective measures such as wearing masks, gloves, goggles etc. Pay attention to fire prevention and maintain good ventilation on site.

If it accidentally touched the skin or clothes, acetone can be used to wipe at once, and then a great deal of clear water is used to flush;

If accidentally swallowed or splashed into the eyes, please seek medical service at once.

For more information, please visit our website at www.horseen.com



INTERNATIONAL
CONCRETE REPAIR
INSTITUTE