

HM-120CP

High Performance Carbon Fiber Plate Adhesive

Description	HM-120CP carbon fiber plate adhesive is double component epoxy based adhesive with strong bonding strength, shear strength. It is used for carbon fiber plate bonding in reinforcement.
Application Range	Use together with HM carbon fiber plate, HM pre-stress carbon fiber plate, used for structure reinforcement.
Product Characteristics	<ul style="list-style-type: none"> ■ Good compatibility with carbon fiber; ■ 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.
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	Ultimate elongation (%)	≥1.5
	Component B: White	Mixture ratio	A:B=2:1
Thixotropic Index		≥4.0	
25°C Sagging mobility		≤2.0	
Density after curing		1.6g/cm ³	

Operable time (min)	In spring and autumn (23°C)	≥50
	In summer (30°C)	≥40
	In winter (10°C)	50~180

Mechanical Properties

Colloidal performance	Compressive strength(MPa)	≥70
	Tensile strength(MPa)	≥38
	Bending Strength(MPa)	≥50
	Elastic Modulus(MPa)	≥3500
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)	≤20
	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: ≤12%
	Heat aging resistance	Compared with the short-term results at same temperature 10min,
		the decrease rate of shear strength: ≤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. Setting out according to designing;
2. Polish the surface of concrete surface to remove painting of the surface, blow out the floating dust with compressed air;
3. Prepare ingredients: agitate component A and B evenly in packaging bucket by weighting in accordance with the weight ratio A: B =2:1;
4. Installing: Past the above mixed glue compounds onto the surface of carbon fiber plate evenly, please avoid bubbles;
5. Anchorage: paste the carbon fiber plate onto the concrete surface and fixed with steel strip, remove excessive glue compounds around, and fix With Steel framework;
6. Maintenance: conservation time should be no less than 24 hours at room temperature.

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.
Carbon fiber material is conductive, be careful to the electrical equipments around.

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