

BEEP 6211 High strength epoxy resin adhesive

The Solutions that Create Value! Suitable for motor VPI process, glass fiber bonding, automobile parts assembly

Product description

BEEP 6211 Epoxy Adhesive is a resin glue that cures at room temperature or heat. This two-component adhesive is designed for metal bonding, SMC glass fiber reinforced plastic parts bonding, aluminum honeycomb panel splicing and motor product iron core Nomex paper bonding, etc.

BEEP 6211 epoxy adhesive can be cured in room temperature and heating environment. After thoroughly mixing component A and component B at a ratio of 1:1 (weight ratio), the product will cure within a certain period of time to form protection.

The cured glue has the following characteristics:

- ✧ Resistant to moisture, dirt and other atmospheric components
- ✧ High strength, excellent adhesion
- ✧ Good pollution resistance, low surface pretreatment requirements
- ✧ No solvent, no curing by-products
- ✧ Excellent high and low temperature resistance, -50°C-150°C
- ✧ Good adhesion to glass fiber cloth and steel plate

Typical application

Used for bonding of SMC glass fiber reinforced plastic parts, splicing of aluminum honeycomb panels and bonding of transformer motor cores, bonding of Nomex paper, repairing of high-speed rail tracks, bonding of rail transit metal and plastic, metal and composite materials, etc.

Conventional performance

Test items	Test standard	Unit	Part A	Part B
Appearance	Visual	---	Black	creamy-white
Status	Visual	---	Paste slightly collapsed or sticky	Paste slightly collapsed or sticky
Density	GB/T 13354-92	g/cm ³ (25°C)	1.35	1.35

Operation process

Item	Unit or condition	Value
Mixing ratio	weight ratio	100:100
Mixing ratio	Volume ratio	100:100
Mixed density	g/cm ³ (25°C)	1.35
Operating time (1)	min (25°C)	6211 Gray: 80mins 6211 Black: 20mins
Curing time	°C/min	60°C 20 mins or 25°C 24 hrs

1) The operating time is tested with the amount of 100g glue.

Take out the two components A and B according to the proportion, stir and mix evenly, and then cure at 60°C 60 mins or 25°C 24 hr.

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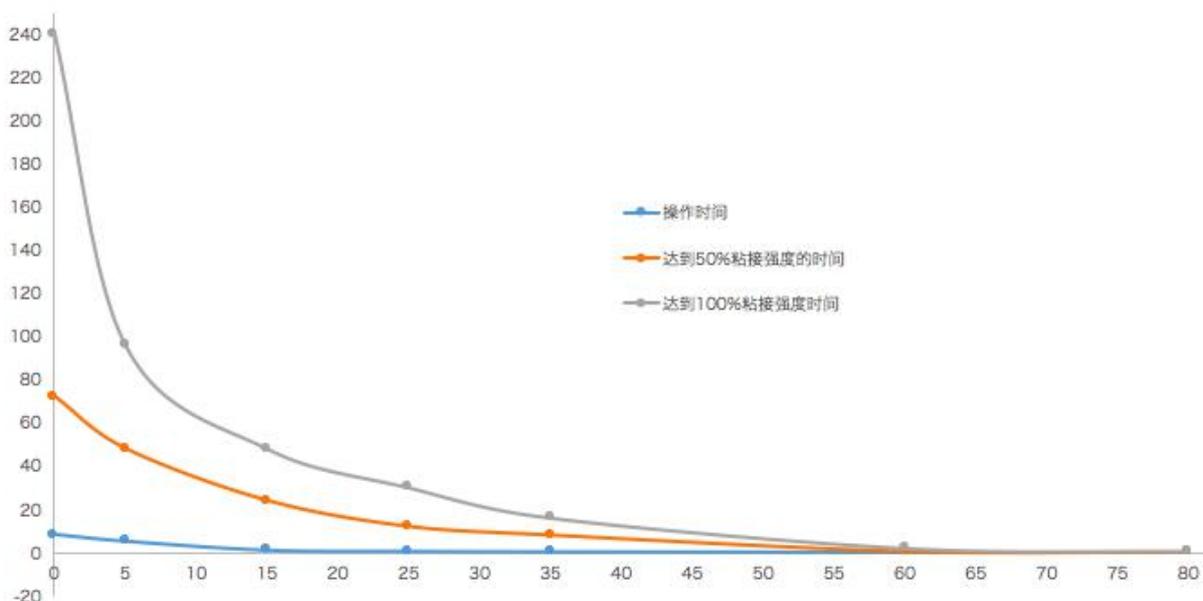
Operation precautions

- 1、 Surface treatment. Use sandpaper or solvent to clean the surface of the adherend, remove surface grease and dirt, and improve the bonding environment.
- 2、 It is recommended to mix the A/B components evenly with barrels A and B before use, and keep them sealed after taking A and B.
- 3、 Pay attention to mixing in the same direction when mixing, otherwise too many bubbles will be mixed; the rubber material on the frame and bottom of the container should also be stirred evenly, otherwise there will be local uncured phenomenon caused by uneven mixing.
- 4、 If the temperature is too low, the curing speed will be slow. When the initial strength cannot be reached, constant temperature control on site is required.
- 5、 Pay attention to keeping the material opening sealed during the use of Cartridge packaging.
- 6、 The curing process of this glue is an exothermic reaction, the amount of glue will affect the length of the operation time, so the operation time under the amount of 100g is only a reference time.

Curing speed

BEEP 6211 Black							
Temperature, °C	0	5	15	25	35	60	80
Operating time, h	8	5	1	0.5	0.3	0.1	0.05
Time to reach 50% bonding strength, h	72	48	24	12	8	0.5	0.1
Time to reach 100% bonding strength, h	240	96	48	30	16	2	0.5

It is not recommended to use the ambient temperature below 5°C. If it is used, it is necessary to heat the AB glue to above 20°C before applying to obtain the best mixing effect. For the best curing speed, you can choose a heating curing method or a pre-baked dispensing product.



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Typical performance

Item	Test standard	Unit	Value
Hardness	GB/T 531.1-2008	Shore D	83
Shear strength	GB 6328-86	Mpa, Al/Al	18
Thermal Conductivity	GB/T 10297-1998	W/mK	0.4
Coefficient of expansion	GB/T 20673-2006	μm/ (m, °C)	55
Water absorption	GB/T 8810-2005	24h, 25°C, %	<0.3
Dielectric strength	GB/T 1693-2007	kV/mm (25°C)	>20
Loss factor	GB/T 1693-2007	(1MHz) (25°C)	0.014
Dielectric constant	GB/T 1693-2007	(1MHz) (25°C)	3.53
Volume resistance	GB/T 1692-92	(DC500V) Ω·cm	1.2×10 ¹⁵

Note: All the above data are measured after curing for 7 days under the condition of 25°C and 55%RH.

Item	Test standard	Unit	Value	
Compressive strength	12hr	GB 11837-89	MPa	≥30
	24hr	GB 11837-89	MPa	≥55
Tensile Strength	2hr	GB/T 528-2009	MPa	≥3
	24hr	GB/T 528-2009	MPa	≥30
Bonding strength	GB/T 7124-2008	Mpa	>8	
Shrinkage	GBT15585-1995	%	<1.5	
Elongation at break	GB/T 528-1998	%	>3	
Temperature range	GBT 20028-2005	°C	-40 ~ 150	

Aging test performance

Substrate	Aging condition	Shear strength, MPa	Way of destruction
SMC/SMC	High and low temperature impact (- 40°C/30mins, 80°C/30mins, repeatedly 10 times)	9.2	90% substrate damage
Al/Al		15.8	90% substrate damage
Nomex paper /Nomex paper		4.6	80% substrate damage
SMC/SMC	150°C/1h	8.5	100% substrate damage
Al/Al		12.6	100% substrate damage
Nomex paper/ Nomex paper		2.3	48% substrate damage

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Packing specification

- 1、 BEEP 6211 gray, A 0306180 B0306181;
- 2、 BEEP 6211 black, A 0306645 B0306646;
- 3、 Part A: 20 kg / barrel; Part B: 20kg/barrel;
- 4、 600ml Cartridge (A 300ml / B 300ml) dual Cartridge
- 5、 50ml dual Cartridge

Storage and transportation

1. Component B should be kept away from light, heat and sealed (can be transported and stored as non-dangerous goods);
2. Storage period A component: 1 year, B component: 1 year (25°C).

Safe operation information

Product safety information is not included here. Before use, please read the product information, product safety information and packaging labels for safe use. Product safety information can be obtained from BEGINOR and various distributors, or you can write an email to the BEGINOR service center service@beginor.com or call 021-64243697.

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