

华聚 BONDHUAJU®	东莞市亚聚电子材料有限公司 YAJU ELECTRONIC MATERIAL CO.,LTD.	0812
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SMT 贴片红胶 0812

华聚 BONDHUAJU® 0812 型贴片红胶，是单组份的环氧树脂胶粘剂，非常合适中高速点胶使用。其容许低温固化，高速及超高速微量点胶，仍可以保持不拉丝、不溢胶、不塌陷。胶点的稳定形状，胶点形状非常容易控制，储存安定性好且具有优良的耐热冲击性和优良的电气特性，同时使用安全，不含溶剂，无气味完全符合环保要求。

0812 的特性

成份	环氧树脂
外观	红色糊状
比重	1.20
粘度	310Pa S
触变指数	6.7(1rpm/10rpm)
接着强度 2125C	47N(4.8kgf)0.2mgr twin
Mini-mold tr	51N(5.2kgf)0.3mgr twin
SOP IC 16P	96N(9.8kgf)0.8mgf single×2
电气特性	
体积阻抗系数	$3.8 \times 10^{16} \Omega \text{ cm}$ JIS K6911
绝缘阻	
初期值	$2.8 \times 10^{14} \Omega$ JIS Z3197
处理后	$2.8 \times 10^{12} \Omega$
介电常数	3.12/1MHZ JIS K6911
介电正接	0.012/1MHZ JIS K6911
保存条件	0℃~10℃的冰箱保存

- 处理条件：85℃×85%RH×DC50V×1000hrs.
- 使用 JIS Z3197 梳型电极 II 型 (G10)

包装方式

包装方式	容量	包装单位	点胶机设备厂商
1. 圆柱筒	300ml	5Pcs.	For our filling machines only
2. 圆柱筒	200gr	5Pcs.	For our filling machines only
3. 点胶管 A	30cc	12Pcs.	KYUSHU MATSUSHITA,SANYO,TDK, CITIZEN,TOSHIBA,SONY,CKD, NITTO KOGYO,YAMAHA
4. 点胶管 B	30cc	12Pcs	FUJI

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5. 点胶管 C	30cc	12Pcs	Panasert(Long:Mo)
6. 点胶管 D	20cc	12Pcs	Panasert(Short:MK,MV)
7. 点胶管 E	10cc	12Pcs	TENRYU,CASIO,JUKI,OKANO

特征

1. 容许低温度硬化。尽管超高速涂敷、微少量涂敷仍可保持没有拉丝，塌陷的稳定形状。
2. 对于各种表面粘着零件，可获得稳定的粘接强度。
3. 对于各种表面粘着零件，可获得安定的接着强度。
4. 储存安定性优良。
5. 具有高度耐热性和优良的电气特性。

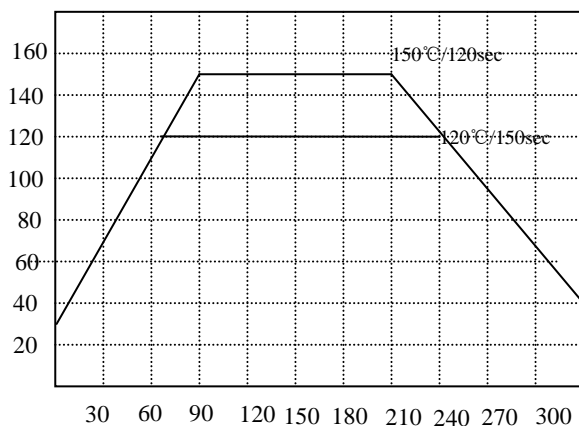
固化条件

1. 建议固化条件是 PCB 板表面温度达到 150℃后 90 秒至 120 秒，最高温度不超过 165℃;或者 PCB 板表面温度达到 120℃后 120 秒至 180 秒，升温速度小于 1.5℃/秒。
2. 在理想的固化温度中，固化时间越长，可获得更高的粘接强度。PCB 板上装着的元件其材质、大小等不同，使得实际附加于胶粘剂的温度也会有所不同，因此请依据实际生产情况找出最适合的固化条件。

使用方法

1. 为使胶粘剂的特性发挥最大效果，请务必放置于冰箱（0℃~10℃）保存。
2. 使用前请务必提前 4 小时从冰箱取出，待红胶恢复至室温（25℃±3℃）后使用。
3. 对红胶的洗涤可使用醋酸乙酯。

固化条件曲线图



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注意事项

1. 保证期：6个月。贴片红胶必须冷藏于0~10℃之冰箱中,且必须在有效期内方可使用,(有效期为厂商生产日期之后6个月以内)。贴片红胶取用时,提前4小时从冰箱取出于室温下回温,室温下放置不能超过10天,否则需报废。作业中断或制程变更时,未使用完之胶材在25℃±3℃内,在一周内可继续使用。PCB板若已施胶(点胶或网板漏印刷胶),必须在4小时内贴片并回焊完成。已回温但可能长时间不需使用之胶材,需再放入冰箱冷藏。应定时检查并记录冰箱温度。使用贴片红胶贴片并回流焊完成组装的PCB板,最好在7天内于锡炉中完成上锡焊接。
2. 请务必将本品保存在0℃~10℃的冰箱内。
3. 如果有过敏性体质的人,直接接触皮肤有时会引起皮肤过敏,因此请注意。
4. 误沾皮肤时,请立即用肥皂水清洗。
5. 进入眼睛时,请尽速以清水冲洗干净,立即接受医生的诊察。

备注

本产品不宜在纯氧或富氧系统中使用。不可做为氯气或其他强氧化性物质的密封材料使用。有关本产品安全注意事项,请与亚聚技术部联系。冷藏储存的产品必须等到与室温(25℃±3℃)平衡后方可使用。使用之前应避免污染,沾在线路板上未固化的胶可用异丙醇等来擦掉。为了避免污染未用过的胶液,不可将任何胶装回原来的包装容器内。本文中的资料是根据实际的测试资料和周期性试验取得的,仅供客户参考,对于任何人采用我们无法控制的方法得到的结果,我们恕不负责。决定把本产品用于哪一种生产方法,及采取用哪一种措施来防止产品在贮存和使用过程中可能发生的损身和人身伤害都是客户自己的责任。建议客户每次在正式使用之前都要根据本文所提供的资料先做试验。

0812型贴片红胶物化性能

物理特性资料(固化方法: 在150℃固化3分钟)

项目	测定值
比重	1.20
粘度(25℃·5rpm)	310 Pa·s
触变指数(1rpm/10rpm)	6.7
吸水率	0.18%
玻璃化温度	142℃
线性膨胀系数	3.5×10 ⁻⁵ (Tg 以下) 12.8×10 ⁻⁵ (Tg 以上)
热膨胀系数(ASTM D3386,10-6/℃)	60
体积阻抗系数(JIS K6911)	3.8×10 ¹⁶ Ω cm
热强度(ASMT-D-1002)	>8 Mpa >900 Psi
收缩率	0.8%

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导热系数 (W/m°C)	0.5
硬度 (Shore D)	89
抗张强度 (ASTM D882, N/mm ²)	75

耐热焊料浸渍性

根据 IPC SM817 (2.4.42.1) 标准, 产品经热焊料浸渍试验合格。将使用 0812 型贴片红胶粘接到 FR4PCB 板上的 C-1206 电容器置于 280°C 的焊料炉上方停留 60 秒, 然后在炉中浸渍 10 秒, 没有任何元件脱落移位。

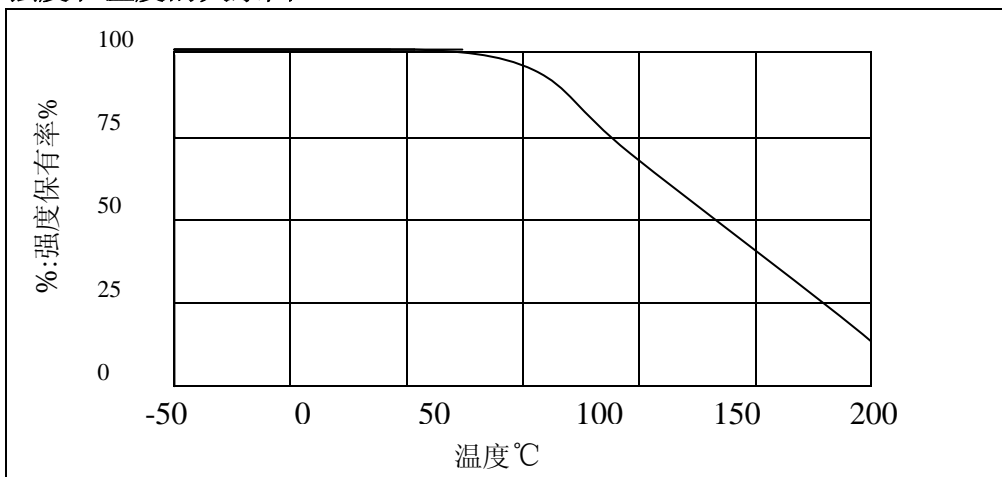
固化后强度测试 (在 150°C 固化 90 秒, 测试方法为水平直推)

芯片类别	用量(mg)	粘合强度 N(kgf)
2125c	0.20mg	4.8
2125R	0.20	4.9
3216C	0.25	5.6
3216R	0.25	5.8
Glass Diode 3.5×1.4φ	0.40	3.5
Mini-mold Tr 3216 A	0.40	5.2
B	0.40	5.5
Sop IC 12pin	1.60	8.5
12pin	3.2	15.5

耐环境性能 (在标准温度下老化, 在 22°C 试验下)

条件	温度	初始强度剩有率%		
		100hr	500hr	1000hr
空气	22°C	100	100	100
空气	150°C	96	96	92
98%RH:	40°C	92	88	85

强度和温度的关系图



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Syringe Dispense SMT Adhesives 0812

BONDHUAJU® 0812 SMT Adhesives is a kind of single epoxy resin adhesive. It can be hardened at a very low temperature. Good stable curing shapes without stringing, overflowing and slumping are achieved at a super high speed spreading and very small dots. The dots have a good stability which makes them easy to be controlled and preserved. High heat-resistivity and excellent electric properties are possessed. Moreover it is good for the environment protection because of its safety, no solvent and no smelling.

Specification of 0812

Composition	Epoxy resin
Appearance	Paste/red-colored
Specific gravity	1.20
Viscosity at 25°C,5rpm	310Pa S
Thixotropy index	6.7(1rpm/10rpm)
Adhesive Strength 2125C Mini-mold tr SOP IC 16P	47N(4.8kgf)0.2mgr twin 51N(5.2kgf)0.3mgr twin 96N(9.8kgf)0.8mgf single×2
Electric Property	
Volume resistance	$3.8 \times 10^{16} \Omega \text{ cm}$ JIS K6911
Insulation resistance	
Initial value	$2.8 \times 10^{14} \Omega$ JIS Z3197
After treating*	$2.8 \times 10^{12} \Omega$
Dielectric constant	3.12/1MHZ JIS K6911
Dielectric loss tangent	0.012/1MHZ JIS K6911
Preservation condition	To be strictly kept at 0°C ~ 10°C in refrigerator

- Treating condition: 85°C × 85% RH × DC50V × 1000hrs.
- JIS Z3197 Measured at comb electrode model II (G10)

Package styles

Package styles	Contents	Pack.Unit	Applicable Dispenser Makers
1. cylinder	300ml	5Pcs.	For our filling machines only
2. cylinder	200gr	5Pcs.	For our filling machines only

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3. Syringe A type	30cc	12Pcs.	KYUSHU MATSUSHITA,SANYO,TDK, CITIZEN,TOSHIBA,SONY,CKD, NITTO KOGYO,YAMAHA
4. Syringe B type	30cc	12Pcs	FUJI
5. Syringe C type	30cc	12Pcs	Panasert(Long:Mo)
6. Syringe D type	20cc	12Pcs	Panasert(Short:MK,MV)
7. Syringe E type	10cc	12Pcs	TENRYU,CASIO,JUKI,OKANO

Features

1. Induration can be achieved in a lower temperature.
2. Very good stable curing shapes without stringing and slumping are achieved at super high speed spreading and very small dots.
3. stable adhesive strength can be obtained with a variety of SMD.
4. Long-term preservation stability is expected.
5. High heat-resistivity and excellent electric properties are possessed.

Curing condition

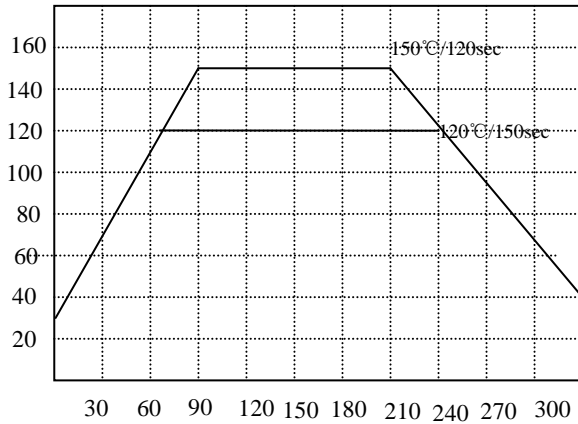
1. The curing condition recommended is in 90~120 seconds after the PCB's surface temperature has reached 150 °C with the maximum temperature does not exceed 165 °C; or in 120~180 seconds after the PCB's surface temperature has reached 120°C.
2. The longer the curing time is , the stronger adhesive strength can be obtained.
The components mounted on the PCB have different material , size , etc ,which also makes the actual temperature attached to the adhesive different. So please identify the most suitable curing conditions based on the actual production situation.

How to use

1. Adhesive should be preserved in refrigerator (below 0°C ~ 10°C) to keep on its quality.
2. Before processing the adhesive should be taken out from the refrigerator for de-freezing about 2 hours until it reaching the room temperature.
3. Toluene or ethyl acetate is possible to use for cleaning up this adhesive.

Example:curing profile

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Warning

1. Warranty:6 Months.
- 2.Store adhesive in a refrigerator keeping the temperature at 0°C ~10°C.
- 3.This product may cause skin irritation to sensitive personnel.
- 4.In case 0812 gets in touch with skin,wash it thoroughly with soap and water.
- 5.In case of eye contact,wash out with clean water and consult a medical doctor immediately.

Remark

Please don't use it in pure or rich oxygen system..It can't be used as sealing material for chlorine or other materials with strong oxidations. As for the warnings,please contact with YAJU. You can only use the cold storage products when they are balanced with the room temperature. Before using it ,you must keep it unpolluted. Some unhardend SMT overflowing on the circuit board could be brushed by isopropyl alcohol.Never put any used SMT into the former packing container for avoiding to pollute the unused one. The dates here are got by practical testing and periodical experiment only as a reference for customers. We aren't responsible for any results that other people get by some uncontrolled ways .How to use our product and how to prevent it from harming people in the course of preservation and use are also your duty. We hope that you can do some testings according to our dates when you want to use it.

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0812 SMT adhesive physicochemical properties

Physical properties data(Curing method:Cured at 150°C for 3 minutes)

Item	Measured value
Proportion	1.20
Viscosity (25°C·5rpm)	310 Pa·s
Thixotropic index (1rpm/10rpm)	6.7
Water absorption	0.18%
Glass transition temperature	142°C
Coefficient of linear expansion	3.5×10 ⁻⁵ (T _g 以下) 12.8×10 ⁻⁵ (T _g 以上)
Coefficient of thermal expansion (ASTM D3386,10-6/°C)	60
Volume resistance coefficient (JIS K6911)	3.8×10 ¹⁶ Ω·cm
Heat intensity (ASMT-D-1002)	>8 Mpa >900 Psi
Shrinkage rate	0.8%
Thermal conductivity (W/m°C)	0.5
Hardness (Shore D)	89
Tensile strength (ASTM D882, N/mm ²)	75

Heat solder dipping resistance

According to the IPC SM817(2.4.42.1) standard,products are qualified by the hot solder dip test.Put the C-1206 capacitor which FR4PCB has been stuck to with 0812-SMT adhesive above the solder furnace at 280°C for 60 seconds,then dip 10 seconds in the furnace,without any component off or shift.

Strength test after curing(Cured for 90 seconds at 150°C,test method : horizontal direct push)

Kinds/sizes of chips	Applying amount(mg)	Adhesive Strength N (kgf)
2125c	0.20mg	4.8
2125R	0.20	4.9
3216C	0.25	5.6
3216R	0.25	5.8
Glass Diode 3.5×1.4φ	0.40	3.5
Mini-mold Tr 3216 A	0.40	5.2
B	0.40	5.5
Sop IC 12pin	1.60	8.5
12pin	3.2	15.5

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Environmental performance(aging at standard temperature,in the trial of 22 degrees)

Initial strength retained rate%

Condition	Temperature	100hr	500hr	1000hr
Air	22°C	100	100	100
Air	150°C	96	96	92
98%RH:	40°C	92	88	85

Relational graph of intensity and temperature

