

SHENZHEN FITECH CO., LTD.

# 低温导电胶系列— 规格书

Low temperature solder adhesive  
series

FACA-1387、FACA-1388、FACA-1389、FACA-138X

技术部

Technical Department

## Technical Data Sheet

### 导电胶（Solder Adhesive）FACA-138

#### 一、简介 Introduction

FACA-138 系列导电胶采用球形度好，粒度均匀，氧含量低的 SnBiAg 低温超微焊粉及活性助焊剂配制的优质低温导电胶，导电填充料粒度均匀及产品分散性好，热固化后绝缘材料粘结增加可靠性，热压固化过程中没有溶剂挥发，热压温度低，锡粉熔化，与焊盘发生冶金连接，热压固化后粘接强度高，纵向导电性良好，横向不导电，为优良的各向异性焊接材料。用于电子元件制造过程中在两个窄间距导电连接点的焊接使用，避免产生线路间的短路，提高良率。应用在触摸屏、智能卡、射频识别（RFID）、倒装芯片(Flip chip)、FPC 等产品。适合于微电子超细间距线路的组装与封装领域，更有利于微电子封装的微型化。

FACA-138 series solder adhesives are made of SnBiAg low-temperature ultra-fine solder powder and flux with good sphericity, uniform particle size and low oxygen content. The conductive filling material has uniform particle size and good product dispersion. After hot curing, the epoxy material will bond to increase reliability. Metallurgical connection with the pad, high bonding strength after hot pressing curing, good longitudinal conductivity, transverse non-conductivity, for an excellent anisotropic soldering material. It is used in the welding of two narrow spacing conductive connection points in the manufacturing process of electronic components to avoid short circuit between lines and improve yield. It is used in touch screen, smart card, radio frequency identification (RFID), Flip chip, FPC and other products. It is suitable for the assembly and packaging of microelectronic ultra-fine pitch lines, and is more conducive to the miniaturization of microelectronic packaging.

#### 二、产品特性及优势：Features and Advantages

1. 热压固化后粘接强度高，导电性良好。  
High bonding strength and good electrical conductivity after hot pressing curing.
2. 可实现低温快速焊接固化、高精度焊接。  
Can achieve low temperature fast soldering cured, high precision welding.
3. 导电粒子球形度好，粒度均匀及产品分散性好。  
Conductive particles have good sphericity, uniform particle size and good product dispersion.
4. 触变性好，粘度合适，稳定性好。  
Good thixotropy, suitable viscosity, good stability,

#### 三、技术特性：Technical feature

1. 未固化时特性: Before curing

产品性能 Feature	指标 Result		备注 Note
外观 Appearance	灰色 gray		流体 fluid
金属填料类型 Alloy	Sn42Bi57.6Ag0.4		
金属填料粒径 Powder size	FACA-1387 T7 2-11μm FACA-1388 T8 2-8μm FACA-1389 T9 1-5μm FACA-138X T10 1-3μm		类型
金属填料熔点 Alloy melting point	139°C		
金属填料比例 Powder content	10~30%		根据焊盘及填料粒子尺寸进行调整 Adjust according to pad and filler particle size
粘度 Viscosity	10~40 Pa.s		Malcolm (10rpm)
触变指数 Ti	0.1~0.4		Lg (3rpm/30rpm)
卤素含量 Halogen Cl+Br	Cl<500	Cl+Br<1000ppm	
	Br<500		
固化条件 Curing	150°C×5min		
保质期 Shelf life	3 month@ -20°C		

四、包装储存 Package and storage

1. 包装 Package

- EFD 针筒 5g/5cc、10g/10cc、30g/30cc 包装，可按客户要求包装，运输时采用蓝冰+泡沫箱+纸箱包装。
- The dispensing syringes are packed in 10g/5cc, 10g/10cc, 20g/10cc according to customer's requirements. They are packed in blue ice, foam boxes and cartons during transportation.

2. 运输储存 Transport storage

- 运输条件: 蓝冰冷冻运输; Transport: blue ice

- 储存条件：收到后应尽快将其放进冰箱储存，建议储存温度为 $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 。温度过高会相应缩短其使用寿命，影响其特性。

Storage: It should be stored in the refrigerator as soon as possible after receipt. The recommended storage temperature is  $-20 \pm 5^{\circ}\text{C}$ . If the temperature is too high, it will shorten its service life and affect its characteristics.

- 有效期限：在 $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 正常密封储存条件下，有效期为3个月。

Shelflife: 3 months under normal sealed storage conditions of  $-20 \pm 5^{\circ}\text{C}$ .

- 工作时间：建议回温后24小时内使用完毕。

Work time: Used within 24 hours after returning to temperature.

## 五、使用方法：Instructions

- ✓ 回温方式：不开启盖子的前提下，于室温中自然回温；回温次数不超过两次；

Recovery method: don't open the bottle cap until the solder is close to room temperature, No more than two times of temperature return;

- ✓ 回温时间：室温下回温2小时。达到热均衡所需要的实际时间因容器大小而异。

Recovery time : Generally, paste should be removed from refrigeration 2~4 hours before use. Actual time to reach thermal equilibrium will vary with container size.

- ✓ 注意：未经充足“回温”，不要打开瓶盖，不可用加热的方式缩短“回温”时间；

Note: without enough "recovery", DO NOT open the bottle caps. DO NOT try to heat the paste to lower recovery time.

- ✓ 使用环境：导电胶最佳使用环境温度为 $20-25^{\circ}\text{C}$ ，相对湿度40-60%RH。

Using environment: The best temperature for using the solder paste is  $20$  to  $25^{\circ}\text{C}$ , relative humidity 40-60% RH.

- ✓ 清洗溶剂：醚类，优选丙二醇甲醚（PM）。

**Cleaning solvent: ether, preferably propylene glycol methyl ether (PM).**

## 六、健康与安全方面应注意事项 Health and safety considerations

### 注意！Note!

以下资料仅提供给使用者作参考，用户在使用前应了解清楚。详细内容请查阅本品物料安全数据表(MSDS)。

The following information is provided for users' reference only. Users should know clearly before using it. For details, please refer to the material safety data sheet (MSDS) of this product.

本制品不含受管制的特定化学物质，也不含有机溶剂中毒预防规则中所规制的有机溶剂，但仍需作必要的防范措施，以确保人体健康及安全。

This product does not contain specific chemical substances that are regulated, nor does it contain organic solvents that are regulated in the Organic Solvent Toxicity Prevention Regulations. However, necessary precautions must be taken to ensure human health and safety. For products containing lead, the operation should be carried out in accordance with the Labor Safety and Health Act and lead poisoning prevention rules.

- i. 锡胶是一种化学产品，混合了多种化学成份，应切记避免近距离嗅闻其气味，更不可食用。

Solder adhesive is a chemical product that is mixed with a variety of chemical ingredients. should remember to avoid close smell of its smell, not to be edible.

- ii. 在焊接固化过程中，锡胶中的焊剂产生的部分烟雾会对人体的呼吸系统产生刺激，长时间或一再暴露在其废气中可能会产生不适，因此应确保作业现场通风良好，焊接设备必须安装充足的排气装置，将废气排走。

In the welding process, part of the smoke generated by the flux in the solder adhesive will stimulate the respiratory system of the human body, which may cause discomfort if exposed to the exhaust gas for a long time or repeatedly. Therefore, it is necessary to ensure good ventilation in the operation site.

- iii. 应有必要的防范措施避免锡胶接触皮肤和眼睛。若不慎接触到皮肤，则应立即用沾有酒精的布将该处擦干净，再用肥皂和清水彻底清洗干净。若不慎让锡胶接触眼睛，则需立即用清水冲洗 10 分钟以上，并尽快送医院医治。

Necessary precautions should be taken to prevent the adhesive from touching the skin and eyes. In case of contact with the skin inadvertently, the place should be immediately cleaned with an alcoholic cloth, and then thoroughly cleaned with soap and water. If the tin paste contact the eyes carelessly, it shall be immediately washed with water for more than 10 minutes and sent to the hospital as soon as possible.

- iv. 作业过程中不允许饮食、抽烟，作业后须先用肥皂或温水洗手后才能进食。

No eating or smoking is allowed in the course of homework. After homework, you must wash your hands with soap or warm water before eating.

- v. 虽然本品之溶剂系统闪点较高，但仍然易燃，应避免接近火源。若不慎着火，可用二氧化碳或化学干粉、泡沫灭火器进行灭火，不可用水灭火。

Although the solvent system of this product has a very high flash point, it is still flammable and should be avoided. If you accidentally catch fire, use carbon dioxide or chemical dry powder fire extinguisher to extinguish the fire. Do not use water to extinguish the fire.

- vi. 废弃的锡胶和清理后沾有锡胶污渍的清洁布不能随意掉弃，应将其装入封密容器中，并按国家和地方的相关法规处置。

The waste solder adhesive and the cleaning cloth with solder adhesive stains after cleaning shall not be discarded at will. It shall be put into a sealed container and disposed of in accordance with relevant national and local regulations.