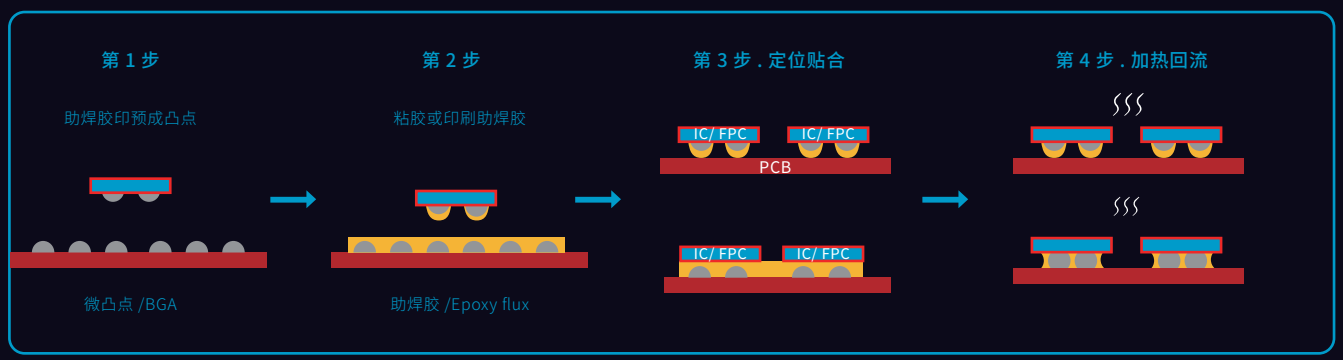
助焊胶 FEF-180 / 240

Epoxy flux

FEF-180/FEF-240 产品，是根据市场需求而自主研发与生产的零卤环氧型助焊胶，在焊接后的焊点周围残留物是已固化的环氧树脂，可起到绝缘、防腐蚀、增加可靠性并同底部填充胶、绑定胶等相兼容。本产品分别可实现印刷（FEF-180P/FEF-240P 系列）与点胶（FEF-180D/FEF-240D 系列）等生产工艺制程。

FEF-180/FEF-240 products are zero-halogen epoxy soldering flux independently developed and produced according to market demand. The residue around the solder joints after soldering is cured epoxy resin, which can provide insulation , Anti-corrosion, increase reliability and compatible with underfill and binding glue. This product can realize printing (FEF-180P/FEF-240P series) and dispensing (FEF-180D/FEF-240D series) and other production processes.

助焊胶封装工艺图 / Epoxy flux packaging process diagram



特性 *Features*

零卤素、无飞溅、免清洗、简化生产工艺

Zero halogen, no splash, no cleaning, simplified production process

结晶度（小于10μm）均匀，可采用印刷、点胶、涂敷等工艺

The crystallinity (less than 10μm) is uniform, and printing, dispensing, coating and other processes can be used

优异的可焊性，增加可靠性，表面绝缘和防腐蚀

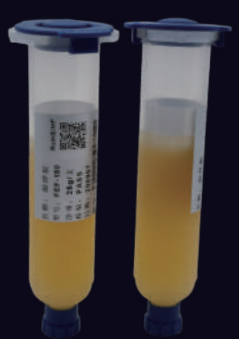
Excellent solderability and increase reliability, surface insulation and corrosion protection

产品固化方式选择灵活，例如回流炉，电热板，烤箱等。

Flexible product curing options, such as reflow oven, electric hot plate, oven, etc

高触变性，粘度适中，优异的润湿性，在线工作时间长

High thixotropy, moderate viscosity, excellent wettability, long online working time



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助焊胶 *Epoxy flux*

性能参数 *Parameter*

产品名称 Product	FEF-180	FEF-240
固化温度Curing temperature	180°C	240°C
涂覆方法Using method	印刷、点胶、针转移/ printing、Dispensing、Pin transfer	印刷、点胶、针转移/ printing、Dispensing、Pin transfer
粘度Pa.s	30~40	30~40
Ti值	0.4~0.8	0.4~0.8
结晶度Crystallinity size	小于 (Less than) 10μm	小于 (Less than) 10μm
未固化状态Uncured state	乳白至淡黄色膏状Cream white to light yellow paste	乳白至淡黄色膏状Cream white to light yellow paste
固化后状态State after curing	透明色Transparent white	透明色Transparent white
固化后绝缘电阻SIR	大于 (Higher than) 1× $10^9\Omega$	大于 (Higher than) 1× $10^9\Omega$
比重 Solder density	1.15比重瓶	1.15比重瓶
铜板腐蚀 Corrosion	Pass✓	Pass ✓
卤素含量Halogen content	零卤素Zero halogen	零卤素Zero halogen
酸值Acid value	120~140	120~140
硬度/邵氏硬度 Hardness/Shore hardness	14.1 HV GB/T2411 -2008	14.1 HV GB/T2411 -2008

*根据的客户应用需求进行定制。Can be customized according to customer application requirements

产品应用

Product Application

在微电子生产、装配、封装时的助焊材料，具有自组装和自纠正功能。应用于高精密、高可靠性的微电子封装等领域，如晶圆凸点焊接、芯片蒸镀焊料、BGA、SIP、CSP、Micro LED 封装、模组集成电路等。

The flux materials used in microelectronics production, assembly and packaging have self-assembly and self-correction functions. Used in high-precision, high-reliability microelectronic packaging and other fields, such as wafer bump welding, chip vapor deposition solder, BGA, SIP, CSP, Micro LED packaging, module integrated circuits, etc.

注意事项 *Precautions*

01 回流与固化 / Reflow and curing

低温产品 FEF-180	高温产品 FEF-240
low temperature FEF-180	high temperature FEF-240
焊盘合金或焊料以 Sn42Bi 合金为例，电热板梯度加热	焊盘合金或焊料以 SAC305 合金为例，电热板梯度加热
Soldering & curing process (PAD/alloy Sn42Bi) Gradient heating of electric heating plate: A, 100°C @30~60s ; B, +180°C @120~240s.	Soldering & curing process (PAD/alloy SAC305) Gradient heating of electric heating plate: A, 150°C @30~60s ; B, +240°C @120~240s.

02 在空气或氮气气氛（<500ppm O2）中，峰值回流温度应 <300°C，且线性上升比液相线温度高 25°C。

该参数为实验室数据，应根据实际情况调整工艺参数。

Peak reflow temperature should be <300°C in an air or nitrogen atmosphere (<500ppm O_2), with a linear ramp up to 25°C above liquidus temperature.
This parameter is laboratory data, and the process parameters should be adjusted according to the actual situation.