

ECCOBOND® CT 5047-2 A/B
Silver Filled, Electrically Conductive
Epoxy Adhesive

Internet Address:
www.emersoncuming.com

Key Feature:	Benefit:
<ul style="list-style-type: none"> • Silver filled 	<ul style="list-style-type: none"> • Ultimate electrical and thermal conductivity
<ul style="list-style-type: none"> • High strength 	<ul style="list-style-type: none"> • Provides reliable and strong electrical connections
<ul style="list-style-type: none"> • Soft thixotropic paste 	<ul style="list-style-type: none"> • Ease of use and dispensing

Product Description:

ECCOBOND CT 5047-2 A/B is a two component, silver filled, electrically conductive, epoxy adhesive. It features good electrical conductivity, high bond strength and excellent heat resistance after cure. ECCOBOND CT 5047-2 A/B can be cured at room temperature, but to achieve ultimate properties it must be cured at temperatures of 65°C or higher.

Applications:

ECCOBOND CT 5047-2 A/B is designed as an adhesive to make electrical connections where hot soldering impractical or to make electrical connections to conductive plastics at locations can not be subjected to high temperatures.

Instructions For Use:

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

To ensure the long term performance of the bonded assembly, complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt, and oils which can cause poor adhesion or corrosion in a bonded part. For information on proper substrate preparation, refer to the reprint "Good Adhesive Bonding Starts With Surface Preparation" available from Emerson & Cuming.

Some filler settling is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.

Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.

Blend components by hand, using a kneading motion, for 2-3 minutes. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.

Apply the adhesive to all surfaces to be bonded and join together. In most applications only contact pressure is required.

Properties of Material As Supplied:

Property	Test Method	Unit	Value - Part A	Value - Part B
Chemical Type			Epoxy	Amine
Appearance	Visual		Soft, silver paste	Clear, amber liquid
Density	ASTM-D-792	g/cm ³	3.48	1.06

Properties of Material As Mixed:

Property	Test Method	Unit	Value
Mix Ratio - Amount of Part B per 100 parts of Part A		By Weight	6
Working Life (100 g @ 25°C)	ERF 13-70	minutes	60
Density	ASTM-D-792	g/cm ³	3.34

Cure Schedule:

Cure at any one of the recommended cure schedules. For optimum properties, cure at 65°C or higher.

Temperature	Cure Time
°C	Time (hours)
25	24
65	2
100	1

Properties of Material After Application:

Property	Test Method	Unit	Value
Hardness	ASTM-D-2240	Shore D	82
Tensile Lap Shear Strength aluminum to aluminum @ 25°C	ASTM D-1002	mPa psi	6.9 1,000
Temperature Range of Use		°C	-40 to +130
Outgassing ⁽¹⁾ TML CVC	ASTM-E-595	% %	0.39 0.00
Volume Resistivity cured 2 hours @ 65°C cured 24 hours @ 25°C	ASTM-D-257	Ohm-cm Ohm-cm	0.002 0.02

⁽¹⁾ per NASA Reference Publication 1124. Sample tested was cured for 24 hours @ 25°C plus 2 hours @ 65°C plus 1 hour @ 100°C.

Storage and Handling:

The shelf life of ECCOBOND CT 5047-2 Parts A and B are 24 months at 25°C. For best results, store in original, tightly covered containers. Storage in cool, clean and dry areas is recommended. Usable shelf life may vary depending on method of application and storage conditions.

Health and Safety:

The ECCOBOND CT 5047-2 Part A, like most epoxy compounds, possesses the ability to cause skin and eye irritation upon contact. Certain individuals may also develop an allergic reaction after exposure (skin contact, inhalation of vapors, etc.) which may manifest itself in a number of ways including skin rashes and an itching sensation. Handling this product at elevated temperatures may also generate vapors irritating to the respiratory system.

The ECCOBOND CT 5047-2 Part B is classified as a corrosive material. Direct contact with unprotected eyes or skin can cause severe burns. Certain individuals may also develop an allergic skin or respiratory reaction after exposure. These reactions may manifest themselves in a

number of ways including skin rashes, itching sensation and breathing difficulties. Handling this product may also generate vapors irritating to the respiratory system.

Good industrial hygiene and safety practices must be used when handling this product. Proper eye protection and appropriate chemical resistant clothing must be worn to prevent contact. Consult the Material Safety Data Sheet (MSDS) for detailed recommendations on the use of engineering controls, personal protective equipment and first aid procedures.

This information is only a brief summary of the available safety and health data. Thoroughly review the MSDS for more complete information before using this product.

Attention Specification Writers:

The values contained herein are considered typical properties only and are not intended to be used as specification limits. For assistance in preparing specifications, please contact Emerson & Cuming Quality Assurance for further details.

Medical Implantable Disclaimer

"In the event this product is intended by you for use in implantation in the human body, you are hereby advised that National Starch (or Emerson & Cuming) has not performed clinical testing of these materials for implantation in the human body nor has National Starch (Emerson & Cuming) sought, nor received, approval from the FDA for the use of these material in implantation in the human body. It is YOUR responsibility, as a manufacturer of any such device, to ensure that all materials and processes relating to the manufacture of any medical device fully comply with all applicable federal, state and local laws, rules, regulations and requirements as well as any such laws, rules, regulations, directives or other orders of any foreign country where such product is sold. If you have not undertaken the necessary investigations to ensure compliance you are advised NOT TO USE this product in the manufacture of any device which is to be implanted in the human body. No representative of ours has any authority to change the foregoing provisions."

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