

ECCOBOND™ D 125 F 3 DR

Surface Mount Adhesive

For High Speed Dispensing Applications

Key Feature	Benefit
Low exotherm	No foaming
Low water absorption	No corrosion
High hot strength	No loss of components during wave soldering
High green strength	No movement of components

Product Description :

ECCOBOND D 125 F 3 DR is a one component, low temperature curing surface mount adhesive which applies easily without stringing. It will not sag during cure. The uncured product has no moisture absorption and corrosion after cure is not observed. This single component adhesive cures in 2,5 minutes at 120°C in IR and prevents component movement during board handling or cure.

Properties Of Material As Supplied :

Property	Test Method	Unit	Typical Value
Chemical Type			Epoxy
Appearance	TP-76W		Dark red
Fineness	TP-19W	µm	< 50
Density	TP-13W	g/cm ³	1,32 - 1,37
Calculated Yield (Casson)	TP-535W	Pa	230 - 330

Cure Schedule :

ECCOBOND D 125 F 3 DR can be cured by Infra Red or by convection oven. Cure times will depend on cure temperatures.

Applications :

ECCOBOND D 125 F 3 DR is designed specifically for use on high speed pneumatic and positive displacement dispensers. ECCOBOND D 125 F 3 DR is an excellent adhesive for bonding a complete range of components including chip capacitors and resistors, SOT's, SOIC's and PLCC's.

Instructions For Use :

ECCOBOND D 125 F 3 DR is applied by dispensing, pin transfer, screen or stencil printing. Equipment set-up parameters and related product information are available worldwide from your Emerson & Cuming technical support group.

Temperature	Cure Time	
	IR or Convection Oven	Convection Box Oven
(°C)	(min)	(min)
100	20	30
110	7	20
120	2,5	10

Properties Of Material After Application :

Property	Test Method	Unit	Typical Value
Conversion after 3 min	TP-524W	%	> 90
Linear Cure Shrinkage	TP-547W	%	< 0,5
Hardness	TP-49W	Shore D	> 80
Tensile Lap Shear Strength	TP-21W	MPa	> 8
Coefficient of Thermal Expansion	TP-525W	$10^{-6} K^{-1}$	70 - 80
Glass Transition Temperature	TP-525W	°C	70 - 75
Thermal Conductivity		W/m.K	0,3
Dielectric Constant	TP-545W		3,5
Volume Resistivity	TP-544W	Ohm.cm	> 10^{14}
Service Temperature		°C	120

Storage And Handling :

Store in a cool dry area. Useful shelf life may vary depending on method of application. ECCOBOND D 125 F 3 DR stored at low temperatures must be allowed to return to room temperature before use. This normally takes 8 - 12 hours.

For board and equipment cleaning we advise the use of our CLEANER 50306. Alcohol is not recommended !

Storage Temperature (°C)	Usable Shelf Life (months)
0 to 8	6
18 to 25	2

Health & Safety :

It is recommended to consult the Emerson & Cuming product literature, including material safety data sheets, prior to using Emerson & Cuming products. These may be obtained from your local sales office.

Note :

Please note that Technical Data Sheets may be updated from time to time. Customers are advised that the latest technical bulletins are always available upon request.

Attention Specification Writers :

The technical information contained herein is generally consistent with the properties of the material and should not be used in the preparation of specifications, as it is intended for reference only. This technical information has been derived from one batch of material and may not exactly match the properties of each individual delivered batch. For assistance in preparing specifications, please contact your local Emerson & Cuming office for details. Please contact Emerson & Cuming Quality Assurance for test method details.

(ECCOBOND™, ECCOCOAT™ and STYCAST™ are trademarks of National Starch and Chemical Investment Holding Corporation)

EU-17/05/2006-LM/JS/R&D

Revised 1 October 2006

Europe

Nijverheidsstraat 7
B-2260 Westerlo
Belgium
Tel +(32)-(0) 14 57 56 11
Fax: +(32)-(0) 14 58 55 30

North America

46 Manning Road
Billerica, MA 01821
Tel 800-832-4929
Tel (978) 436-9700
Fax: (978) 436-9701

Asia-Pacific

100 Kaneda, Atsugi-shi
Kanagawa-ken, 243-0807
Japan
Tel (81) 462-258-880
Fax: (81) 462-221-347

P.R. China

No. 332 Meigui South Road
WaiGaoQiao Free Trade Zone
Shanghai 200131
Tel (86)-21-38984800
Fax (86)-21-50484160

NATIONAL STARCH MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF THESE MATERIALS FOR USE IN IMPLANTATION IN THE HUMAN BODY, OR FOR ANY OTHER USE. These materials are not designed or manufactured for use in implantation in the human body. National Starch has not performed clinical testing of these materials for implantation. National Starch has neither sought, nor received, approval from the FDA for the use of these materials in implantation in the human body. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.