

ABLEBOND® 8175

Electrically Conductive Adhesive

Internet Address:
www.emersoncuming.com

TYPICAL PROPERTIES	TEST METHOD	DESCRIPTION
Viscosity @ 25°C: 55,000 cps	PT-42	Ablebond® 8175 electrically conductive epoxy adhesive is designed for solder replacement in microelectronic interconnect applications. This stress-absorbing adhesive may be used with thick film metallizations or traditional printed circuit board surfaces.
Thixotropic Index: 2.0	PT-61	
Work Life @ 25°C: 2 weeks	PT-54	
Cure Condition: 1 hour @ 130°C Cure Option: 1/2 hour @ 150°C		
Lap Shear Strength Al to Al @ 25°C: 1650 psi	MT-6	
Die Shear Strength (80 mil ² IC) Copper to Ag Metallization @ 25°C: 6200 psi	MT-4	
Thermal Shock (-50°C to 150°C): 5000 psi		
Volume Resistivity: 5 x 10 ⁻⁴ ohm-cm	PT-46	
Glass Transition Temperature (T _g): 90°C	MT-9	
Coefficient of Thermal Expansion (TMA) Below T _g : 55 ppm/°C Above T _g : 200 ppm/°C	MT-9	
Weight Loss (TGA) @ 300°C: 0.30%	PT-20	Ablebond 8175 adhesive is capable of resolving fine pitch resolution (0.020 inch) when printed using either a stainless steel mesh screen or a metal mask stencil. It is also syringe dispensable.
Thermal Conductivity @ 121°C: 3.20 W/m ² K	PT-40	
Storage Life @ -10°C: 6 months @ -40°C: 1 year	PT-13	

The figures shown above are typical values only. If you need to write a specification, please request our current Standard Release Specification.

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INSTRUCTIONS

Apply adhesive as required. This material may be applied using either a stainless steel mesh screen or a metal mask stencil. The ideal deposition thickness is 0.003-0.005 inch. Cure at one of the recommended cure schedules.

Additional screen printing instructions are available in the Screen Printing Parameters attachment.

AVAILABILITY

Ablebond® 8175 adhesive is available in a variety of package sizes, ranging from one ounce to one pound.

STORAGE

This adhesive may be stored up to two weeks at room temperature (25°C maximum), 6 months at -10°C, or one year at -40°C.

HEALTH AND SAFETY

CAUTION This product may cause skin irritation in sensitive persons. Avoid skin contact. If contact does occur, wash area immediately with soap and water. Please refer to Material Safety Data Sheet (OSHA) for more details.

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■ Underfills Solder Alternatives C.O.B. Materials
 Film Adhesives Thermal Interfaces ■



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**Solder Replacement Adhesive
Printing Parameters**

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PARAMETERS FOR PRINTING WITH STENCIL

Brass Stencil	8 inches x 10 inches, 5 mils thick
Squeegee Pressure	7 - 9 pounds
Squeegee Speed	6 inches/second
Material Deposition	0.004 inch

PARAMETERS FOR PRINTING WITH SCREEN

Screen Mesh	Wire	Wire Angle	Emulsion Thickness	Mesh Thickness	Material Deposition
200	1.6	30°	0.0012"	3.4	0.003 - 0.004"
200	1.6	45°	0.002"	3.7	0.004 - 0.005"

Squeegee Pressure	8 - 11 pounds
Squeegee Speed	6 inches/second

Above data obtained using Presco Model AMI MSP-462.
Squeegee Size: 3/8 inch x 3/8 inch Square, Black. 70 Durometer from Presco.

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