

Advanced Materials**EPIBOND[®] 7275****EPOXY SURFACE MOUNT ADHESIVES****Description**

EPIBOND 7275 epoxy surface mount adhesives are formulated to meet the performance and quality requirements of printed circuit board manufacturers.

Advantages

Consistent, high dot profile
Good green strength
Fast curing
Six-month work life at 68°F (20°C) room temperature
Nine-month work life at 32°F (0°C)
Resists slumping and stringing with high (>6.0) thixotropic index

Work Life

EPIBOND 7275 epoxy surface mount adhesives are formulated with extended work lives of six months at room temperature. In screen printing applications, this long life accommodates continuous processing over an eight-hour shift. For dot dispensing, the adhesives retain their properties at room temperature to facilitate storage and handling of syringes.

Nationwide Distribution

EPIBOND 7275 epoxy surface mount adhesives are available through a nationwide distribution network to ensure fast response to customer needs and timely, on-schedule product delivery.

Typical Properties

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>	
		<u>7275</u>	<u>7275-1</u>
Composition		Epoxy	Epoxy
Specific Gravity	ASTM D-792	1.28	1.29
Viscosity, (RVT spindle #7), cps @ 1 rpm	ASTM D-1824	3,200,000	2,500,000
cps @ 10 rpm		420,000	320,000
Color	Visual	Red	Red
Thixotropic Index	ASTM D-1824	>6.0	>6.0
Dot Profile, width/height		<2.0	<2.0
Particle Size (μ)		<25	<25

Typical Cured Properties

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>	
		<u>7275</u>	<u>7275-1</u>
Glass Transition Temp., by TMA, °C (°F)	ASTM D-696	66 (151)	65 (149)
Thermal Coefficient of Expansion, by TMA, alpha 1	ASTM D-696	48×10^{-6}	57×10^{-6}
alpha 2		170×10^{-6}	176×10^{-6}
Thermal Conductivity (Cal/Sec·cm·°C)		6.5×10^{-4}	6.4×10^{-4}

Industry Standards

	<u>7275</u>	<u>7275-1</u>
Bellcore - TR-NWT-000078	Compliant	Compliant

Typical Electrical Properties

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>	
		<u>7275</u>	<u>7275-1</u>
Dielectric Strength, volts/mil	ASTM D-149	420	420
Dielectric Constant, at 1 MHz	ASTM D-150	3.87	3.87
Dissipation Factors, at 1 MHz	ASTM D-150	0.025	0.025
Volume Resistivity, Ω cm	ASTM D-257	2.1×10^{15}	2.1×10^{15}
Surface Resistivity, Ω cm ²	ASTM D-257	1.1×10^{15}	1.1×10^{15}

Curing Options

	<u>7275</u>	<u>7275-1</u>
Time at 80°C (176°F), min.	12	12
Time at 120°C (248°F), min.	2.5	2.5
Time at 150°C (302°F), min.	1.5	1.5

NOTE: Actual oven cure is dependent upon board design.

Guidelines For Handling EPIBOND 7275 Surface Mount Adhesives

Reworking

Once cured, EPIBOND 7275 adhesives can be removed from a printed circuit board by heating the board to approximately 80°C (176°F to 185°F). When the temperature of the surface mount component reaches 80°C (176°F), the adhesive will be soft enough to permit component removal using a “lift and twist” method.

After removing the component, re-apply heat to any remaining adhesive until it is soft. Residual material can then be scraped off the board surface.

Cleaning

Uncured adhesives can be easily removed from printed circuit boards, screens or stencils using isopropyl alcohol, NMP and a wide variety of other solvents and cleaning fluids. We are constantly working with manufacturers of solvents and cleaning fluids to test and identify new materials that meet the needs of our customers.

Storage/Handling

EPIBOND 7275 adhesives should be stored in their original containers at temperatures between 0°C (32°F) and 23°C (73°F). Prior to use, the containers should be allowed to stabilize at room temperature for several hours before the packages are opened. Remove any moisture condensation on containers with a dry cloth or paper towel before opening. After containers are opened, materials should be dispensed for immediate use. Then, the containers should be re-sealed as soon as possible to minimize moisture absorption and returned to refrigerated storage. Note: EPIBOND adhesives are hygroscopic. Dispose of material left on the screen printer for more than eight hours. To prevent contamination of unused material, do not return any product to its original container or package. Keep syringes tightly capped.

Equipment Compatibility/Packaging Selection Guide

Equipment	Syringe Style	Package Size
Amistar	7275/EFD	10cc or 30cc
Asymtek	7275/EFD	10cc or 30cc
Camelot	7275/EFD	10cc or 30cc
Creative Automation (ADM 221-1851, ADM 2200, Champion 910, 2000, 3000, 7100, 7150)	7275/EFD	10cc or 30cc
DEK	7275/PYLES	150cc
Dynapert (MPS 318, MPS 525)	7275/EFD	30cc
Dynapert (MPS 118, MPS 525)	7275/EFD	10cc
EFD (1000XL, 1500XL, 1500DV, 2000XL-VR, etc.)	7275/EFD	10cc or 30cc
Fuji (GL-II & GL-V)* Fuji (GI-I with O-ring adapter)*	7275/FUJI	30cc
Intelligent Dispensers (AD-7000Z)	7275/IWA	30cc
ISMEC (Moduline & Miniplacer)	7275/EFD	10cc
Iwashita (Autoshooter7, ASC 7000)	7275/IWA	30cc
KME	7275/IWA	30cc
MPM MPM	7275/SEM 7275/PYLES	300cc 150cc
Panasert (MV-150, HD, HDP2, HPP2C, HDPG1)	7275/IWA	30cc
Phillips (CSM-46, CSM-60, CSM-260)	7275/EFD	10cc
Sanyo (TD-30, 40, 60, 63, 65)	7275/IWA	30cc
Thomson Linear Motion TDK (RX4260 with retrofit) TDK (with retrofit)	7275/EFD 7275/EFD 7275/IWA	10cc 10cc or 30cc 30cc
TDK (non-disposable syringes models)	7275/SEM	300cc
Universal Instruments (4713, 4716, 4768) (kits available for use with Iwashita & Panasert style syringes)	7275/EFD	10cc or 30cc
US Robotics (LD-10, LD-80)	7275/EFD	10cc
Zeta (1400)	7275/EFD	10cc or 30cc
Bulk cartridges for all screen printers and units with non-disposable syringes	7275/PYLES	150cc

*Disposable plungers for Fuji 7275 syringe dispensers available.

Caution:

Huntsman Advanced Materials Americas Inc. maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material. Copies of the latest MSDS may be requested by calling our customer service group at 888-564-9318 or emailing your request to electronics@huntsman.com.

FIRST AID!

Eyes and skin: Flush eyes with water for 15 minutes. Contact a physician if irritation persists. Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Inhalation: Remove subject to fresh air.

Swallowing: Dilute by giving water to drink and contact a physician promptly. Never give anything to drink to an unconscious person.

KEEP OUT OF REACH OF CHILDREN

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Main Offices:
Huntsman Corporation
10003 Woodloch Forest Dr.
The Woodlands
Texas 77380
(281) 719-6000

Huntsman Advanced Technology Center
8600 Gosling Rd.
The Woodlands
Texas 77381
(281) 719-7400

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