

Ingot Mounting Adhesive Systems

COMPONENT PROPERTIES					MIXED SYSTEM PROPERTIES							SLURRY COMPATIBILITY				
Epoxy System	Appearance	Viscosity (cps @ 25°C)	Specific Gravity	Mixing Ratio (by weight)	Gel Time (min.)*	Cure Time (hrs.)**	Working Time (min.)****	Hardness (Shore "D")	Bond Strength (psi)*****		Glass Transition Temp. °C***	Applications	PEG	PEG/ Water	DEG/ Water	Aqueous
									4 hrs.	8 hrs.						
AD1230A AD3831BR	Gray Red	35,000 13,000	1.20 1.14	100 45	12	4	8	75	600	800	<40	Fast curing, low bond strength system	•			
AD1238A AD3848BR	Gray Red	70,000 25,000	1.21 1.31	1 1	5	2	3	84	2,000	2,400	35	Fast curing, high bond strength system	•			
AD1238A AD3853B	Gray Red	70,000 23,000	1.21 1.31	1 1	15	4	10	84	>2,000	>2,500	35	Increased gel time version of AD1238-A / AD3848-BR system	•			
AD1339A AD3939B	White Blue	115,000 45,000	1.60 1.47	1 1	15	2	10	85	2,000	<1,800	40	Increased hardness system to prevent wire marks	•			
AD1339A AD3905B	White Purple	115,000 45,000	1.60 1.47	1 1	30	4	20	85	2,000	2,200	40	Increased gel time version of AD1339-A / AD3939-B system	•			
AD5038A AD5038B	Lt. Tan to Off- White Violet	30,000 30,000	1.52 1.34	2 1	12	>4	>5	82	1,000	1,800	30	Maintains bond strength after 24 hr. cure, resists wafer drop & chipping	•	•	•	•
AD1846A AD1851B	Gray Blue Violet	80,000 30,000	1.3 1.2	2 1	20	>4	10	82	>1,000	>1,500	45	Water-based slurry / coolant applications		•	•	•

The data provided in the table above is typical and accurate to the best of our knowledge and is for reference only.

*Gel Time condition 100 g @ 77°F (25°C). Setup time, solidification time.

**Cure Time conditions @ 77°F (25°C) Time needed prior to ingot slicing, recommended as starting point.

***Glass Transition Temperature using DSC Method

****Working Time, 50g @ 77°F (25°C), recommended maximum time.

*****Typical minimum value only applicable to Valtech test method, not as specification, not to compare to other test methods.

See individual product technical bulletin.

Additional adhesive information on the back page. ▶

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EPOXY ADHESIVE					
Epoxy System	Product Description	Markets	Demounting		
			Debonding Solution	Temperature (°C)	Time Required (min.)
AD1230A AD3831BR	Temporary adhesive system for wafer slicing, fast-curing and low bond strength. Comfortable working time.	Semiconductor	Water	90	<20
			Acetic Acid	>30	<30
			Citric Acid (>10% by wt.)	>50	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			VALTRON® SP2500	>75	<20
AD1238A AD3848BR	Temporary adhesive system for monocrystalline and multicrystalline ingots for the wafer slicing, fast-curing and high bond strength. Applicable for automatic dispensing systems.	Semiconductor LED Photovoltaic	Water	90	<20
			Acetic Acid	>30	<30
			Citric Acid (>10% by wt.)	>50	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			VALTRON® SP2500	>75	<20
AD1238A AD3853B	Temporary adhesive system for monocrystalline and multicrystalline ingots for wafer slicing. Longer working time than AD1238-A / AD3848-B.	Photovoltaic	Water	90	<20
			Acetic Acid	>30	<30
			Citric Acid (>10% by wt.)	>50	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			VALTRON® SP2500	>75	<20
AD1339A AD3939B	General temporary adhesive system offers a unique solution for adhering semiconductor and photovoltaic ingots to mounting fixtures and slicing beams.	Photovoltaic Semiconductor	Water	90	<20
			Acetic Acid	>30	<30
			Citric Acid (>10% by wt.)	>50	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			VALTRON® SP2500	>75	<20
AD1339A AD3905B	General temporary adhesive system for mounting monocrystalline and multicrystalline ingots for the photovoltaic and semiconductor wafer slicing process. Longer working time than AD1339-A / AD3939-B. Applicable for automatic dispensing systems.	Photovoltaic Semiconductor	Water	90	<20
			Acetic Acid	>30	<30
			Citric Acid (>10% by wt.)	>50	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			VALTRON® SP2500	>75	<20
AD5038A AD5038B	Low viscosity, temporary adhesive system ideal for slicing applications where polyethylene glycol (PEG), PEG/water and water coolant is used as a slicing vehicle or a coolant. Good water resistance.	Photovoltaic LED	Acetic Acid	>30	<30
			VALTRON® DP164 (>12% by vol.)	>50	<30
			Citric Acid (>10% by wt.)	>50	<30
AD1846A AD1851B	Temporary adhesive system for mounting monocrystalline and multicrystalline ingots for the photovoltaic and LED wafer slicing process. Good water resistance. Applicable for diamond wire saw with selected debonding solutions.	Photovoltaic LED	Acetic Acid	>30	<30
			VALTRON® DP164 (>12% by vol.)	>45	>10
			Citric Acid (>10% by wt.)	>45	>30

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