

Technical note

J.T.Baker® brand PRS-1000™ bulk photoresist stripper

J.T.Baker brand PRS-1000™ bulk photoresist stripper provides versatile cleaning in traditional semiconductor with aluminum/silicon dioxide layers, compound semiconductor, and packaging applications (flip chips/bumps).

Characteristics

- Efficient bulk resist removal providing photoresist removal in 5–20 minutes
- Non-corrosive so no intermediate solvent rinse is required—decreasing total process time and cost
- Designed to provide broad process latitude in terms of processing time and temperature
- Long bath life—typically greater than 24 hours
- Does not contain fluoride or hydroxylamine

Technical information

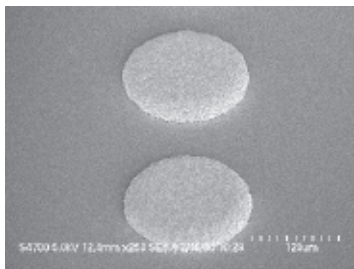
Metal Etch Rates (Å/min) at 85°C				Substrate Etch Rates (Å/min) at 85°C		
Al	Cu	Ti	W	GaAs	SiO ₂	TEOS
<0.5	<0.2	<0.4	<0.1	>1	<1	<1

Product information

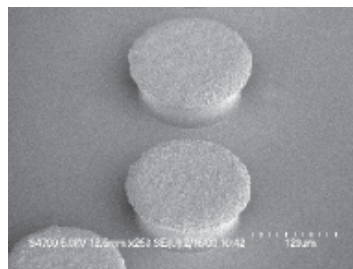
J.T.Baker brand PRS-1000 Stripper			
Bath Life	>24 hours	Viscosity (@ 22°C)	3.5 cS.
Flash Point (Open Cup)	104°C	Solubility in Water	100%
Flash Point (Closed Cup)	96°C	Surface Tension	38.5 dyne/cm
Freezing Point	-35°C	Specific Gravity	1.07 kg/L
Boiling Point	195°C	pH (5% in H ₂ O)	7-10

Material of construction compatibility

316 Stainless Steel	Glass	PTFE	Chemraz®
304 Stainless Steel	Quartz	Polypropylene	Kalrez®
		Polyethylene	Teflon
		PFA	



UNTREATED OXIDE/Pb (Sn) BUMPS



AFTER TREATMENT WITH J.T.BAKER BRAND PRS-1000 STRIPPER AT 85°C, 20 MIN.

Operating guidelines



Handling

Follow guidelines as described in the Safety Data Sheet for this product. Follow the first aid measures in the SDS in the event that you are exposed to J.T.Baker brand PRS-1000 stripper via inhalation, ingestion, or skin or eye contact. Wear protective clothing, chemical resistant gloves, and safety goggles. Wash thoroughly after handling.

Disposal

If your company chooses to dispose of the product, disposal should be in accordance with federal, state, and local requirements. Contact your Environmental, Health, and Safety Officer for further information on how your site would handle and dispose of the material.

Recommended spray recipe for a three manifold semitool

Step #	Step Name	Time (mins)	RPM	M1	M2	M3	Drain
1	RPMSTAB	0:10	50				C1
2	T2DRAIN	0:10	50	T2			C1
3	T2RECL	5-20	50	T2			T2
4	T1TOT2	0:10	50	T1			T2
5	PURGE1	0:05	50	N ₂			T2
6	RINSE1	1:00	50	CDI			C2
7	PURGE1	0:05	50	N ₂			IW
8	RINSELO	1:00	300		CDI		IW
9	RINSEHI	2:00	600		CDI		IW
10	PURGE2	0:05	600		N ₂		IW
11	DRYHI	1:30	1200-1400			N ₂	IW
12	DRYLO	6:00	600			N ₂	IW

The full line of Avantor: J.T.Baker brand photoresist strippers and residue removers

Photoresist Stripper/ Residue Remover	Purpose	Application	Product Number	
			Bottles	Drums
J.T.Baker PRS-1000™	Positive Photoresist Stripper	Aluminum/Silicon Dioxide, Flip Chips, Bumps, Compound Semiconductors	6383	6373
J.T.Baker PRS-2000™	Positive Photoresist Stripper	Flat Panel Display	6400	6410
J.T.Baker PRS-3000™	Positive Photoresist Stripper	Aluminum/Silicon Dioxide, Flip Chips, Bumps, Compound Semiconductors	6403	6413
J.T.Baker ALEG-380	Residue Remover/Photoresist Stripper	Aluminum/Silicon Dioxide, Flip Chips, Bumps, Compound Semiconductors	6475	6485
J.T.Baker ALEG 368	Residue Remover/Photoresist Stripper	Aluminum/Silicon Dioxide, Flip Chips, Bumps, Compound Semiconductors	n/a	6362-09
J.T.Baker CLK™-820	Photoresist Remover	Copper/Low-K	6414	6424
J.T.Baker CLK-888	Photoresist Stripper/Residue Remover	Copper/Low-K	5108	5118
J.T.Baker CLK-222	Photoresist Stripper/Residue Remover	Copper/Low-K	5208	5218
AQUEOUS BASED:				
J.T.Baker REZI™-28	Residue Remover	Aluminum/Silicon Dioxide, Copper/Low-K, Compound Semiconductors	6426	6436
J.T.Baker REZI™-28a (Concentrate)	Residue Remover	Aluminum/Silicon Dioxide, Copper/Low-K, Compound Semiconductors	6425	6435
J.T.Baker REZI™-38	Residue Remover	Aluminum/Silicon Dioxide, Copper/Low-K, Compound Semiconductors	6427	6437
J.T.Baker REZI™ 78	Residue Remover	Aluminum/Silicon Dioxide, Copper/Low-K, Compound Semiconductors	6433-05	6434-10
J.T.Baker REZI™ 98	Residue Remover	Aluminum/Silicon Dioxide, Copper/Low-K, Compound Semiconductors	6508-85	6518-80

Application support

Avantor applications engineers are available to work with you to implement a process that provides a total solution encompassing the use of J.T.Baker brand chemistries in your existing tools or a new facility. Evaluations can be conducted at your manufacturing site or at an Avantor applications laboratory. Contact your Avantor account manager for more information.