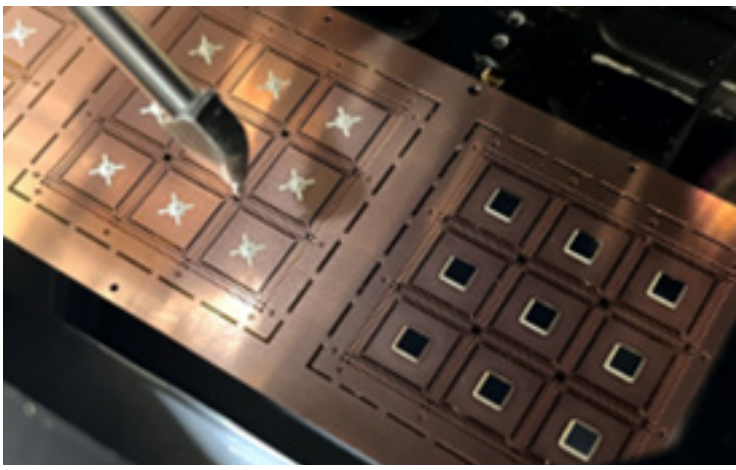
ATROX® CD 560-1

Zero PFAS[1] Electrically and Thermally Conductive Die Attach

ATROX CD 560-1 the industry's first zero PFAS alternate Ag filler technology die attach paste, is a high-performance thermosetting conductive die attach material tailored for high-throughput automated dispensing in metal lead frame semiconductor packages.

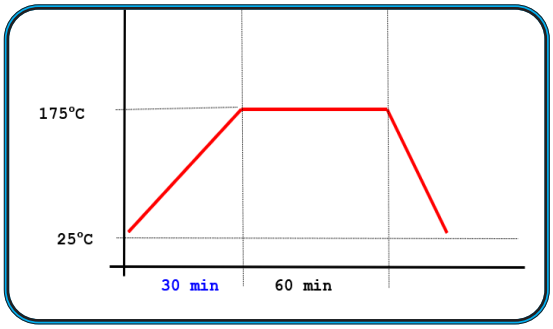


Key Features

- **Excellent Substrate Compatibility and Low RBO:** Bonds reliably to PPF (pre-plated frame) and copper lead frame
- **Long Pot Life and Shelf Stability:** >24 hours pot life at room temperature, 12-month shelf life at -40 ºC
- **Low Outgassing:** Minimizes oven contamination
- **High reliability:** MSL-1 performance and achieves zero delamination on lead frame packages
- **Flexible manufacturability:** Box oven and snap cure capable
- **High throughput automated dispensing:** Optimum rheology maximizes throughput with minimal machine downtime

Zone	1	2	3	4	5	6	7	Total Time (sec.)
Temp (C)	60	90	120	160	200	240	200	600

SNAP Cure Profile



Box Oven Cure Profile

MacDermid Alpha ELECTRONICS SOLUTIONS

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ATROX CD 560-1 sets a new benchmark in die attach adhesives by offering Zero PFAS high-performance solution for variety of substrates. Robust MSL performance and production ready dispensability makes it a standout choice for quality-driven semiconductor manufacturing.

Material Properties	Method	Value	Remarks
A. Uncured			
Chemical Type		Thermosetting	
Color	Visual	Grey	
Viscosity at 25 °C at 5.0 RPM	ASTM D2196-99	10,000 cps	Brookfield Spindle 51
Thixotropic index (0.5 RPM/5.0 RPM)	ASTM D2196-99	3.6	Brookfield Spindle 51
Pot Life @ 23 °C (Time to doubling of viscosity)	ISO 10364:1993	> 24 hours	Brookfield Spindle 51
Storage Temperature		-40 (°C/°F)	
Shelf Life @ -40 (°C/°F)		12 months	
B. Cured			
Glass Transition Temperature (Tg)	TMA	82 °C	
Modulus at 25 °C	DMA	5.0 GPa	
Modulus at 260 °C	DMA	0.58 GPa	
CTE 1 (below Tg)	TMA	4 5 ppm	
CTE2 (Above Tg)	TMA	225 ppm	
Thermal Conductivity: Bulk	Laser Flash	2.5 W/mK	
Weight Loss on Cure	TGA	2%	
Volume Resistivity	4-point Probe	0.0006 Ohm-cm	

[1]Zero PFAS equals no added PFAS.