\$+49-6102-18.1823



Introducing HD8820GS: NMP-free Aqueous Positive PBO

HD8820, an industry standard aqueous positive PBO that has been widely utilized across various applications, including stress buffer, flip chip bonding, and wafer-level chip scale packaging is now NMP-free. With the aim of enhancing our green product line and maintaining performance, quality and excellence, we have successfully applied an innovative NMP elimination process to traditional HD8820 that resulting in HD8820GS. This new process preserves the exceptional characteristics of HD8820 while providing users with an NMP-free product. Features include:

- Alkaline developable, aqueous development chemistry for lower total process cost -
- Positive acting for high resolution
- Specially formulated for fast photo speed to increase throughput in lithography -
- Good mechanical and thermal properties to withstand in the most demanding applications
- Low moisture uptake and excellent dielectric properties to protect vital circuitry
- Wide processing window that reduces in-process monitoring and adjustments _
- Excellent storage stability and room temperature stability, which reduces waste material
- Outstanding copper compatibility, allowing successful use on various substrates.

By maintaining the original backbone and composition of HD8820 qualification efforts of HD8820GS are minimized.

For more information, please do not hesitate to contact us!

Typical Film Properties			(Films cured at 320°C for 1hr)
	UOM	HD8820GS	HD8820 (Ref)
Tensile Strength	MPa	165	160
Elongation	%	80	80
Young's Modulus	GPa	2.4	2.4
Tg (TMA)	°C	280	280
CTE (TMA, 100-200°C)	ppm/K	60	60
Td5	°C	480	480
Dielectric Constant (at 1 GHz)		2.9	2.8
Dielectric tangent (at 1 GHz)		0.0088	0.0105
Dielectric strength	kV/mm	415	425
Volume resistivity	Ohm.cm	3.3 x 10 ¹⁶	2.6 x 10 ¹⁶
Residual stress	MPa	35	35
United States	Japan		Europe
HD MicroSystems L.L.C.	HD MicroSystems, Ltd.		HD MicroSystems GmbH
250 Cheesquake Road	JR Shinjuku Miraina Tower		Hugenottenallee 175
S 800-346 5656 ext 14/15	Tokyo 160-0022		Germany

HD MicroSystems liability is expressly limited by HD MicroSystems' Conditions of Sale shown on Seller's price list or Buyer's copy of Seller's order acknowledgement form (if used) and Seller's invoice. All technical advice, recommendations and services are rendered by the Seller free of charge. While based on data believed to be reliable, they are intended for use by skilled persons at their own risk. Seller assumes no responsibility to Buyer for events resulting or damages incurred from their use. They are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

www.hdmicrosystems.com

\$ +81-3-3868.8121

Caution: Do not use in medical applications involving permanent implantation in the human body.

+1-732.694-3876