Heraeus

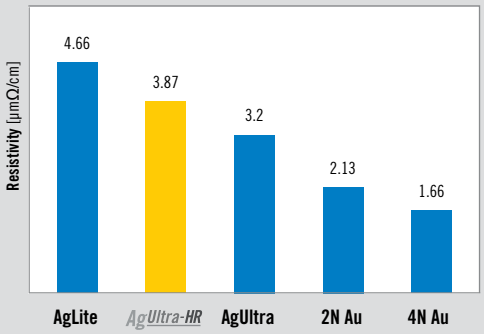
AgUltra-HR

Silver Alloy Wire for Improved Reliability for IC Packaging

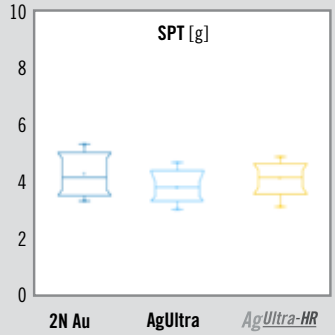
AgUltra-HR Benefits & Features

- Improved reliability for IC packaging
- Improved BST and SPT at time zero
- Improved BST and SPT for HAST

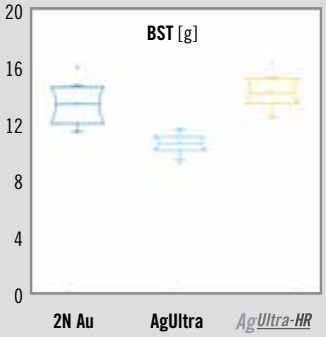
Electrical Resistivity



Stitch Pull Test (SPT)

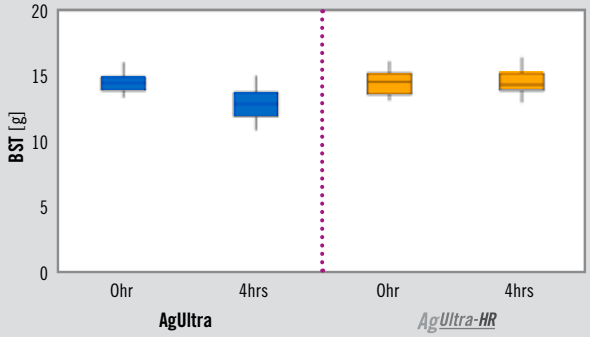


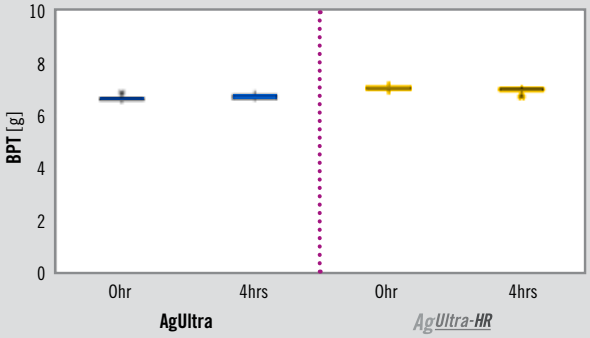
Ball Shear Test (BST)



Corrosion Test Results

Temperature: 130 °C, Humidity: 85 % RH, Pressure: 2.7 kg/cm², Time: 4 hours



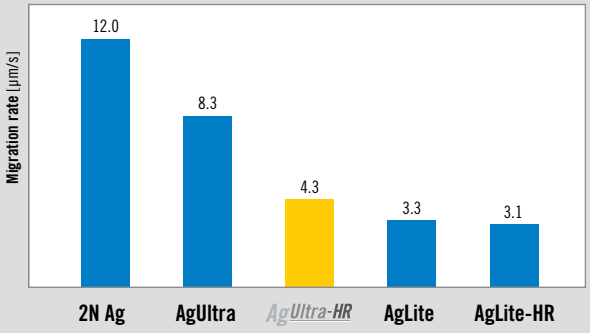


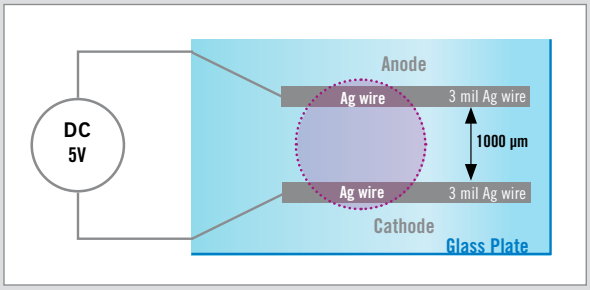
Recommended Technical Data of Ag Ultra-HR

For other diameters, please contact Heraeus Bonding Wires sales representative.

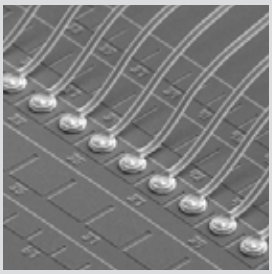
Diameter (Mils)		0.7	0.8	0.9	1.0	1.2	1.5
Elongation (%)		3 ~ 12	3 ~ 12	3 ~ 12	3 ~ 12	3 ~ 12	3 ~ 12
Breaking Load (g)		> 3	> 4	> 6	> 8	> 12	> 20
Grain Size (um)	**Free Air Ball**	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7
	HAZ	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7	2 ~ 7
	Wire	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
Hardness (Hv)	**Free Air Ball**	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68
	HAZ	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68	58 ~ 68
	Wire	70 ~ 80	70 ~ 80	70 ~ 80	70 ~ 80	70 ~ 80	70 ~ 80
Density (g/cm³)		10.60	10.60	10.60	10.60	10.60	10.60
Fusing Current (mA)		299	331	366	406	498	680
Resistivity (µΩ cm) @ 20 °C		3.87	3.87	3.87	3.87	3.87	3.87
Melting Point (°C)		1005	1005	1005	1005	1005	1005
Thermal conductivity (W*m-1*K-1) @ 25 °C		202	202	202	202	202	202

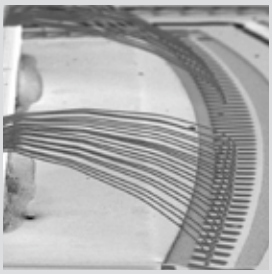
Migration Results

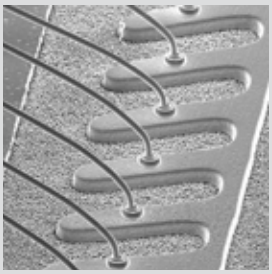




Different Bonding Profiles







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