



GENERAL

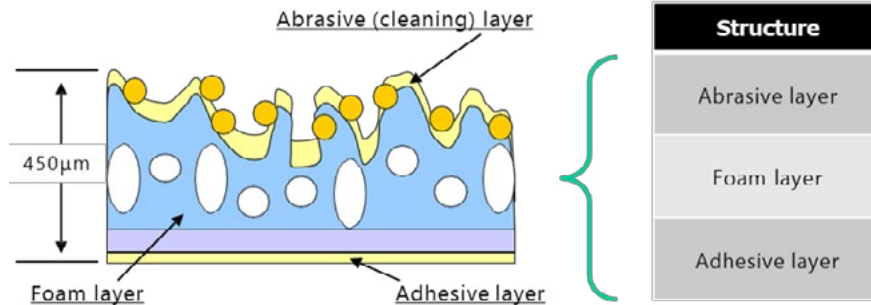
The presence of chlorine ions and chloride contamination on a bond pad surface can act as a catalyst for the copper (Cu) corrosion process and dramatically weaken the copper-aluminum (Cu-Al) intermetallic compounds (IMC). Reduced bond integrity can create long-term reliability issues for packaged devices.

LC4K (low-chlorine, abrasive foam) cleaning sheets were developed with chlorine levels of <100 ppm versus >800ppm of the WA4000-SWE (yellow). The LC4K cleaning material has the same surface morphology / cross-section structure and matched material properties that define cleaning efficiency (i.e., hardness and wear rate). As with WA4000-SWE, the maximum operating temperature of the LC4K material is T = 80C.

To reduce the risk of chlorine contamination the LC4K (Low-Cl) material can be used as a direct replacement for the chlorinated WA4000-SWE for probe card cleaning applications

Material Property	LC4K (Low-Cl)	WA4000
Color	Orange-Yellow	Yellow
Abrasive	#4000, Alumina	#4000, Alumina
Installed Thickness	~450um	~450um
Chlorine Content	< 100ppm	> 800ppm
Operating Temperature	0C to 80C	0C to 80C

CROSS SECTION



	Cleaning Material Configuration			
	Sheet	200mm Wafer	300mm Wafer	Custom Install
LC4K Layer Thickness	450 µm (nominal)	450 µm (nominal)	450 µm (nominal)	450 µm (nominal)
Support Carrier		725 ± 20µm (SEMI Standard)	775 ± 20µm (SEMI Standard)	Contact ITS
Total Installed Stack Height	450 ± 100µm ¹	1175 ± 120µm ¹	1225 ± 120µm ¹	Contact ITS

1. Due to inherent lot-to-lot height variations associated with the abrasively coated foam, a certificate of inspection is provided with each material lot and should be used as the starting prober overtravel.

