CMP PAD HAVING ULTRA EXPANDED POLYMER MICROSPHERES

ABSTRACT

A polishing pad for chemical mechanical polishing comprises a polishing layer which comprises a polymer matrix which is the reaction product of an isocyanate terminated oligomer or polymer, with a curative blend comprising two or more polyamine curatives wherein pores are present in the polymer matrix, such pores being formed by expansion of pre-expanded fluid filled polymeric microspheres such expansion occurring during reaction of the isocyanate terminated oligomer or polymer with the two or more curatives, wherein the polishing layer is characterized by one or more of a ratio of shear loss modulus (G") at 104 °C to shear loss modulus (G") at 150 °C of at least 5:1; and a specific gravity of the polishing layer is less than or equal to 95% of a calculated specific gravity for the isocyanate terminated oligomer or polymer, the curative blend and the pre-expanded fluid filled polymeric microspheres.

[Figure 1a]