Title (en)
Chemical mechanical polishing pad

Title (de)
Chemisch-mechanisches Polierpad

Title (fr)
Plaquette de polissage mécanique et chimique

Publication
EP 2151299 A2 20100210 (EN)

Application
EP 09154680 A 20090309

Priority
US 22158108 A 20080805

Abstract (en)
The polishing pad is for polishing patterned semiconductor substrates. The pad includes a polymeric matrix and hollow polymeric particles within the polymeric matrix. The polymeric matrix is a polyurethane reaction product of a curative agent and an isocyanate-terminated polytetramethylene ether glycol at an NH 2 to NCO stoichiometric ratio of 80 to 97 percent. The isocyanate-terminated polytetramethylene ether glycol has an unreacted NCO range of 8.75 to 9.05 weight percent. The hollow polymeric particles having an average diameter of 2 to 50 µm and a wt% b and density b of constituents forming the polishing pad as follows: wt % a * density b density a = wt % b where density a equals an average density of 60 g/l, where density b is an average density of 5 g/l to 500g/l, where wt% a is 3.25 to 4.25 wt%. The polishing pad has a porosity of 30 to 60 percent by volume; and a closed cell structure within the polymeric matrix forms a continuous network surrounding the closed cell structure.

IPC 8 full level
B24B 37/04 (2012.01); **B24D 3/32** (2006.01)

CPC (source: EP US)
B24B 37/24 (2013.01 - EP US); **B24D 3/32** (2013.01 - EP US)

Citation (applicant)
US 7169030 B1 20070130 - KULP MARY JO [US]

Designated contracting state (EPC)
DE FR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2151299 A2 20100210; **EP 2151299 A3 20130619**; **EP 2151299 B1 20140611**; CN 101642897 A 20100210; CN 101642897 B 20110803; JP 2010041056 A 20100218; KR 20100017064 A 20100216; TW 201006854 A 20100216; TW I482789 B 20150501; US 2010035529 A1 20100211

DOCDB simple family (application)
EP 09154680 A 20090309; CN 200910161171 A 20090804; JP 2009182027 A 20090805; KR 20090071492 A 20090804; TW 98123685 A 20090714; US 22158108 A 20080805