

ABSTRACT

ETCHANT, REPLENISHMENT SOLUTION AND METHOD FOR
PRODUCING COPPER WIRING USING THE SAME

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An etchant for copper and copper alloys, includes an aqueous solution containing: 14 to 155 g/liter of cupric ion source in terms of a concentration of copper ions; 7 to 180 g/liter of hydrochloric acid; and 0.1 to 50 g/liter of azole, the azole including nitrogen atoms only as heteroatoms residing in a ring. A method for producing a wiring by etching of copper or copper alloys, includes the step of: etching a portion (2a) of a copper layer (2) on an electrical insulative member (1) that is not covered with an etching resist (3) using the above-described etchant so as to form the wiring (4). Thereby, a fine and dense wiring pattern with reduced undercut can be formed.

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[Selected Figure] Fig. 1A and 1B