

METAL-COATED POLYIMIDE RESIN SUBSTRATE WITH EXCELLENT
THERMAL AGING RESISTANCE PROPERTIES

ABSTRACT

[Object] To provide a metal-coated polyimide resin substrate that does not deteriorate the initial adhesion between the metal-coated polyimide resin film and the metal layer and has high adhesion after aging at 150°C for 168 hours.

[Solution] A metal-coated polyimide resin substrate in which a barrier layer is formed by a wet process after performing surface modification to one surface or both surfaces of a polyimide resin film by a wet process or a dry process or a combination thereof, a seed layer is thereafter formed by a wet process or a dry process, and a conductive film is formed on a surface layer thereof by a wet process; wherein, at the peeling surface on the conductive film layer side after the metal-coated polyimide resin substrate is subject to a 90-degree peel test, the thickness of a mixed layer of polyimide residue and barrier metal layer residue according to in-depth profiling with a time-of-flight secondary ion mass spectrometer (TOF-SIMS) is 2.60 nm or less based on Si sputter rate conversion, and peel strength retention after an aging test at 150°C for 168 hours (peel strength after aging at 150°C for 168 hours/initial peel strength) is 50% or higher.

[Selected Drawing] Fig. 1