

## ABSTRACT

5 Provided are a barrier film for a flexible copper substrate comprising a Co-Cr alloy film containing 5 to 30wt% of Cr and a balance of unavoidable impurities and Co, having a film thickness of 3 to 150nm, and film thickness uniformity of 10% or less at  $1\sigma$ ; and a sputtering target for forming a barrier film comprising a Co-Cr alloy containing 5 to 30wt% of Cr and a balance of unavoidable impurities and Co, wherein the relative magnetic permeability in the in-plane direction of the sputtered face is 100 or less. The barrier film for a flexible copper substrate and the  
10 sputtering target for forming such barrier film have a film thickness that is thin enough to prevent film peeling in inhibiting the diffusion of copper to a resin film such as polyimide, is capable of obtaining a sufficient barrier effect even in a minute wiring pitch, and have barrier characteristics that will not change even when the temperature rises due to heat treatment or the like.

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