

ABSTRACT

HIGH-PURITY COPPER-MANGANESE-ALLOY SPUTTERING TARGET

5 Provided is a high-purity copper-manganese-alloy sputtering target comprising 0.05 to 20 wt.% of Mn, 2 wt ppm or less of C, and the remainder being Cu and inevitable impurities, wherein in formation of a film on a wafer by sputtering the target, the number of particles composed of C, at least one element selected from Mn, Si, and Mg, or a compound composed of C and at least one element selected from Mn, Si, and Mg and having a diameter of 0.20 μm or more is 30 or less on average. Particle generation during sputtering can be effectively
10 suppressed by thus adding an appropriate amount of Mn element to copper and controlling the amount of carbon. In particular, a high-purity copper-manganese-alloy sputtering target that is useful for forming semiconductor copper alloy line having a self-diffusion suppression function is provided.