

ABSTRACT

A reflective mask blank used in EUV lithography using EUV light as exposure light comprising at least a substrate 10; a multilayer reflective film 50 that is formed on the substrate 10 and reflects exposure light; and a multilayer film 200 containing tantalum (Ta). The multilayer film 200 has a TaN part 210, a TaO part 230, and a Ta part 220 provided between the TaN part 210 and the TaO part 230. A density of the Ta part 220 is higher than densities of the TaN part 210 and the TaO part 230. The density of the Ta part 220 is 13 g/cm³ or more.

Fig. 1