

ABSTRACT

The present invention provides a reflective mask capable of reducing the shadowing effect and having
5 sufficient hydrogen radical resistance and a method for producing the reflective mask. A reflective mask (100) according to this embodiment includes: a substrate (11); a reflective film (12) reflecting an EUV light having a multi-layer film structure formed on the substrate (11);
10 a protective film (13) formed on the reflective film (12) and protecting the reflective film (12); an absorption film pattern (14a) absorbing the EUV light formed on the protective film (13); and an oxide coating (15) formed on the absorption film pattern (14a), in which the
15 absorption film pattern (14a) contains Sn and a metal element other than Sn and has a ratio of the atomic weight of Sn to the total atomic weight of the metal element other than Sn ($\text{Sn/Metal element other than Sn}$) within the range of 1 or more and less than 20 and the
20 oxide coating (15) is resistant to hydrogen radicals and is formed on the surface and the side surfaces of the absorption film pattern (14a).

Fig. 1