

## ABSTRACT

REFLECTIVE MASK BLANK, REFLECTIVE MASK, METHOD FOR  
PRODUCING REFLECTIVE MASK BLANK, AND METHOD FOR  
PRODUCING REFLECTIVE MASK

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A reflective mask blank includes a substrate,  
a multilayered reflection film configured to reflect  
EUV rays, a protection film configured to protect the  
multilayered reflection film, and an absorption film  
10 configured to absorb the EUV rays in this order. The  
protection film contains Rh as a main component. The  
multilayered reflection film includes an uppermost  
layer that is closest to the protection film in the  
multilayered reflection film and contains Si and N. In  
15 the uppermost layer, an element ratio (N/Si) of N to Si  
is greater than 0.00 and less than 1.50, and an element  
ratio (O/Si) of O to Si is 0.00 or greater and less  
than 0.44.