CLAIMS

1. An alumina catalyst for dehydration used for producing isobutylene by a dehydration reaction of isobutanol, the catalyst for dehydration having a BET specific surface area, which is calculated from N_2 adsorption/desorption isotherms, within a range of from 210 m^2/g to 350 m^2/g.

2. The alumina catalyst for dehydration according to claim 1, wherein a specific surface area of the catalyst for dehydration is from 215 m^2/g to 350 m^2/g.

3. The alumina catalyst for dehydration according to claim 1, wherein a specific surface area of the catalyst for dehydration is from 220 m^2/g to 350 m^2/g.

4. The alumina catalyst for dehydration according to claim 1, wherein a specific surface area of the catalyst for dehydration is from 225 m^2/g to 350 m^2/g.

5. The alumina catalyst for dehydration according to claim 1, wherein a specific surface area of the catalyst for dehydration is from 230 m^2/g to 350 m^2/g.

6. A method for producing isobutylene by using the alumina catalyst for dehydration according to any one of claims 1 to 5 filled in a reactor through a dehydration reaction of isobutanol.

7. The method for producing isobutylene according to claim 6, wherein a concentration of isobutanol in a reaction gas to be supplied into the reactor is 20% by volume or more.

8. The method for producing isobutylene according to claim 6, wherein a concentration of isobutanol in a reaction gas to be supplied into the reactor is 40% by volume or more.

9. The method for producing isobutylene according to claim 6, wherein a concentration of isobutanol in a reaction gas to be supplied into the reactor is 60% by volume or more.

10. The method for producing isobutylene according to any one of claim 6, wherein a temperature of a catalyst layer in the reactor is from 230°C to 360°C.

11. The method for producing isobutylene according to any one of claim 6, wherein a temperature of a catalyst layer in the reactor is from 240°C to 350°C.