CLAIMS

[Claim 1]

A catalyst for a hydrogenation reaction, comprising 40-80 parts by weight of nickel as a catalyst active component, 0.01-5 parts by weight of copper as an accelerator, and 10-30 parts by weight of a silica support based on 100 parts by weight of the entire catalyst.

[Claim 2]

The catalyst of claim 1, wherein a crystal size of the nickel is 3-8 nm.

[Claim 3]

The catalyst of claim 1, wherein the catalyst has a degree of reduction of 80% or more after removal of a passivation layer.

[Claim 4]

The catalyst of claim 1, wherein an average particle size (d_{50}) of the catalyst is 3-10 μm, and a volume ratio of the catalyst having a particle size of 1 μm or less is 10% or less.

[Claim 5]

The catalyst of claim 1, wherein the catalyst has a surface area of 150-300 m^2/g.

[Claim 6]

The catalyst of claim 1, wherein the silica support has a specific surface area of 200-400 m^2/g and an average particle size of 3-10 μm.

[Claim 7]

A method for producing a catalyst for a hydrogenation reaction, the method comprising:

preparing a first solution by dissolving a nickel precursor in a solvent so that a weight concentration (g/L) of nickel in a solution is 25-250;

preparing a second solution by adding a copper precursor to the first solution so that a weight concentration (g/L) of copper in a solution is 0.01-5;

preparing a third solution by dispersing a silica support in the second solution so that a weight concentration (g/L) of silica in a solution is 10-40;

adding the third solution to a precipitation container, stirring the third solution, and heating the third solution to a temperature of 50-120°C;

adding a pH control agent to the heated third solution, causing the nickel and copper precursors to form a precipitate, and depositing the precipitate on the solid silica support;

washing and filtering the supported catalyst and drying the supported catalyst at 100-200°C for 5-24 hours;

sintering the dried catalyst in air at a temperature of 200-500°C; and

activating the sintered catalyst by reducing the sintered catalyst at a temperature of 200-500°C in a hydrogen atmosphere.

[Claim 8]

The method of claim 7, further comprising passivating the activated catalyst.

[Claim 9]

The method of claim 8, wherein the passivating is performed by passivating the activated catalyst with a nitrogen mixed gas including 0.1-20% oxygen.

[Claim 10]

The method of claim 7, further comprising passivating the activated catalyst by depositing the activated catalyst in a solution including a hydrocarbon resin.

[Claim 11]

The method of claim 7, wherein the precipitation is performed at pH 7-9.

[Claim 12]

A method for hydrogenating a hydrocarbon resin, wherein the hydrocarbon resin is brought into contact with hydrogen in the presence of the catalyst produced by the method of any one of claims 7 to 11.