CLAIMS

1. A process for preparing a catalyst useful in the hydrogenation of methyl phenyl ketone (MPK) to methyl phenyl carbinol, which catalyst comprises:
mixing a copper salt containing solution with a composition containing a silicate salt selected from the group consisting of sodium silicate and calcium silicate resulting in a mixture containing a precipitated solid;
recovering the precipitate solid from the mixture;
subjecting the recovered precipitated solid to a temperature in the range of from 150 to 500 °C to provide a thermally treated precipitated solid;
mixing the thermally treated precipitated solid with a silica sol containing silica particles having an average size in the range of from 1 to 100 nm to provide a second mixture;
forming the second mixture into a shaped body; and
drying the shaped body at a temperature in the range of from 80 to 160 °C followed by subjecting the shaped body to a temperature in the range of from 150 to 500 °C to yield the catalyst.

2. The process according to claim 1, wherein the silicate salt is sodium silicate.

3. A process for preparing a catalyst wherein the process comprises:
mixing a copper salt-containing solution with an alkali metal silicate salt resulting in a precipitated solid;
mixing the mixture with an alkaline earth metal silicate salt to provide a mixture; and
subjecting the mixture to a temperature in the range of from 150 to 500 °C.

4. A process for preparing a catalyst, wherein the process comprises:
mixing either an alkaline earth metal silicate salt, or a silicate salt containing composition with a precipitated solid, wherein the precipitated solid results from mixing a copper salt containing solution with a first silicate salt containing composition, to provide a mixture; and
subjecting the mixture to a temperature in the range of from 150 to 500 °C .

5. The process according to claim 4, wherein the first silicate salt of the silicate salt containing composition is an alkali metal silicate salt.

6. A process for preparing an activated catalyst, which process comprises:
mixing a copper salt containing solution with a silicate salt containing composition resulting in a precipitated solid;
subjecting the precipitated solid to a temperature in the range of from 150 to 500 °C resulting in a thermally treated precipitated solid;

mixing the thermally treated precipitated solid with a shaping aid containing suspension;

shaping the mixture thus obtained resulting in shaped bodies;

subjecting the shaped bodies to a temperature in the range of from 150 to 500 °C to provide a catalyst; and

activating the catalyst by contacting it with hydrogen gas to thereby provide an exothermic reduction reaction of the catalyst to provide the activated catalyst.

7. The process according to claim 6, wherein the silicate salt is either an alkali metal silicate salt or an alkaline earth metal silicate salt.

8. The process according to claim 7, wherein the silicate salt comprises an alkali metal silicate salt.

9. The process according to claim 5, wherein the precipitated solid is thermally treated at a temperature in the range of from 150 to 500 °C before mixing with the alkaline earth metal silicate salt or the first silicate salt-containing composition.

10. The process according to claim 5, further comprising:

mixing a second alkaline earth metal silicate salt with the copper salt containing solution and the first silicate salt containing composition in providing the mixture.

11. The process according to claim 10, wherein the first silicate salt of the silicate salt- containing composition is an alkali metal silicate salt.

12. The process according to claim 5, further comprising:

mixing a second alkaline earth metal silicate salt with the precipitated solid before the thermal treatment of the precipitated solid.

13. The process according to claim 5, further comprising:

mixing a second alkaline earth metal silicate salt and a shaping aid with the thermally treated precipitated solid to provide a second mixture;

forming the second mixture into a shaped body; and

drying the shaped body at a temperature in the range of from 80 to 160 °C followed by subjecting the shaped body to a temperature in the range of from 150 to 500 °C to yield the catalyst.

14. The process according to claim 5, wherein the catalyst comprises an amount of copper in the

range of from 40 to 95 wt%, calculated as copper (II) oxide (CuO) based on the total weight of the catalyst.

15. The process according to claim 14, further comprising:

activating the catalyst by contacting it with a hydrogen gas to thereby provide an exothermic reduction reaction of the catalyst to provide an activated catalyst.

16. The process according to claim 15, wherein the alkali metal silicate salt is a sodium silicate salt, the alkaline earth metal silicate salt is a calcium salt, and the silicate salt of the silicate salt-containing composition is a sodium silicate salt.

17. The process according to claim 2, wherein the catalyst comprises an amount of copper in the range of from 40 to 95 wt%, calculated as copper (II) oxide (CuO) based on the total weight of the catalyst.

18. The process according to claim 17, further comprising:

adding a base to the mixture of copper salt-containing solution and silicate salt to provide for a pH of 7 or greater; and

heating the mixture to a temperature in the range of from 50 to 95 °C.

19. The process according to claim 3, wherein the catalyst comprises an amount of copper in the range of from 40 to 95 wt%, calculated as copper (II) oxide (CuO) based on the total weight of the catalyst.

20. The process of claim 19, further comprising:

mixing a base with the copper salt-containing solution and alkali metal silicate salt that results in the precipitate solid; and

heating the resulting mixture of copper salt-containing solution, alkali metal silicate salt, and base at a temperature in the range of from 50 to 95 °C.

21. The process according to claim 20, wherein the alkali metal silicate is a sodium silicate salt and the alkaline earth metal silicate salt is a calcium silicate salt.

22, The process according to claim 8, wherein the catalyst comprises an amount of copper in the range of from 40 to 95 wt% calculated as copper (II) oxide (CuO) based on the total weight of the catalyst.

23. The process according to claim 21, further comprising:

mixing a base with the copper salt-containing solution and alkali metal silicate salt the results in the precipitate solid; and

heating the resulting mixture of copper salt-containing solution, alkali metal silicate salt, and base at a temperature in the range of from 50 to 95 °C.