

Process for the preparation of crystalline microporous and mesoporous metal silicates, products obtainable by said process and their use

Abstract

Microporous and mesoporous metal silicates are prepared by the hydrothermal reaction of a silicon and metal source in the presence of a template. The choice of raw materials influences the purity and hence the catalytic activity of the products.

According to the invention a pyrogenic mixed oxide is used as the silicon and metal source. Preferred products have the composition $(\text{SiO}_2)_{1-x}(\text{A}_m\text{O}_n)_x$, where A is Ti, Al, B, V or Zr and x is 0.005 to 0.1. Shaped objects of the microporous and mesoporous metal silicates are obtained directly by using a shaped object of the pyrogenic mixed oxide. Products obtainable according to the invention are used as oxidation catalysts.

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