promoter. The CO_2/MeSH selectivity ratios are comprised between 0.60 and 0.77 measured at 300°C.

From the teaching of these documents it has been observed that combining catalysts with specific structures, promoters and supports, each being carefully selected, means that interesting selectivity ratios can be achieved.

There is a current need for a catalyst that is simply synthesized and leads to very good selectivity. This technical problem has been resolved by a molybdenum- and potassium- based catalyst supported by hydroxyapatite.

Summary

In one aspect of the present disclosure, there is provided a catalyst comprising a molybdenum- and potassium-based active component and a hydroxyapatite-based support.

In another aspect of the present disclosure, there is provided a preparation process for the catalyst as defined herein, characterized in that it comprises the following steps:

- preparing the precursor for the active phase
- preparing the support, and
- dry impregnating the support with the active phase precursor.

In a further aspect of the present disclosure, there is provided a production process for methyl mercaptan in a catalytic process by reacting carbon oxide, sulfur and/or hydrogen sulfide and hydrogen, comprising the use of a catalyst as defined herein.

In another aspect of the present disclosure, there is provided a use of hydroxyapatite as a support for preparing the catalyst for producing methyl mercaptan.

Description

It has been observed that the catalyst according to the invention is easier to prepare, given that the presence of a promoter is not indispensable. It is less costly than those disclosed in the previously cited documents. And lastly, it leads to very good CO_2/MeSH selectivities.

The invention also relates to the preparation process for this catalyst.

The invention also relates to a process for producing methyl mercaptan from synthesis gas and hydrogen sulfide using the catalyst according to the invention.

The invention also relates to the use of the catalyst as defined above for the synthesis of methyl mercaptan from synthesis gas and hydrogen sulfide.

Lastly the invention relates to the use of hydroxyapatite as support for preparing a catalyst for producing methyl mercaptan, and in particular in a catalytic process by reacting carbon oxide, sulfur and/or hydrogen sulfide and hydrogen.

Other characteristics, features, subjects and benefits of the present invention will emerge even more clearly on reading the description and the examples that follow.

Any range of values denoted by the expression "between a and b" represents the values ranging from more than a to less than b (i.e. limits a and b excluded), while any range of values denoted by the expression