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 EXXON RES & ENG CO *EP -131-465-A
 02.07.84-US-625170 (+US-511651) (16.01.85) 801i-27/22 C07c-01/04

Fischer-Tropsch catalyst - comprises iron carbide and ilmenite on titania support

C85-008341 D/S:DE GB NL

Full priorities: 07.07.83(2), 02.07.84-US-511651, 611653, 625169, 625170.

A catalyst for producing C_2 + alkane hydrocarbons from mixtures of CO and H_2 comprises a mixt. of iron carbide and ilmenite supported on titania, where the amount of iron present in the iron carbide and ilmenite, calculated as Fe_2O_3 , ranges between about 2-25 mg/m² of titania support surface.

The catalyst pref. contains 0.5-5 wt. % of one or more alkali promoter metals based on the amount of supported iron.

USE

The catalysts are used in Fischer-Tropsch synthesis for conversion of CO and H_2 .

PREPARATION

The catalyst is prepd. by:

(a) depositing iron on a titania support from a solution of

E(10-J2D) H(9-D) N(2-A, 3-B)

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iron precursor in an amount such that the final catalyst contains supported iron in an amount of at least about 2mg/m² of titania support;

(b) calcining at an elevated temp. of at least 120°C (e.g. 120-500°C) for a time sufficient to decompose the precursor and convert at least a portion of the supported iron to Fe_2O_3 ;

(c) contacting with H_2 at 300-500°C for a time sufficient to convert at least a portion of the supported iron to a reduced composite; and

(d) contacting with CO at 200-500°C for a time sufficient to form the catalyst. (21pp994MHDwgNo0/1)
 (E)ISR:No Search Report.

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