Title (en)

PRODUCTION OF ALCOHOL BLEND USABLE IN FLEXIBLE FUEL VEHICLES VIA FISCHER-TROPSCH SYNTHESIS

Title (de)

HERSTELLUNG EINER IN FLEXIBLE FUEL VEHICLES VERWENDBAREN ALKOHOLMISCHUNG MITTELS FISCHER-TROPSCH-SYNTHESE

Title (fr)

PRODUCTION D'UN MÉLANGE D'ALCOOL UTILISABLE DANS DES VÉHICULES FLEXIBLES EN CARBURANT VIA LA SYNTHÈSE DE FISCHER-TROPSCH

Publication

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Application

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Abstract (en)

[origin: WO2008115242A1] Alternative fuel compositions, blends of the alternative fuel compositions and gasoline, and methods for their preparation and use are disclosed. The alternative fuel compositions ideally include ethanol, isopropyl alcohol, and one or more of sec-butanol and t-butanol, and ideally include no more than 3% methanol, and no more than 15% C₅ or higher alcohols. The fuel compositions can be prepared using Fischer- Tropsch synthesis to convert syngas to a product stream comprising C₂₋₄ olefins, and hydrolyzing these olefins. The process facilitates isolation of C₂₋₄ alkanes, because the boiling point difference of these alkanes is significantly lower than that of the C₂₋₄ alcohols. Ideally, the compositions provide more energy per unit volume than E85, even without the addition of gasoline, although the compositions can be blended with gasoline in any desired ratio. The resulting alternative fuel can be derived, at least in part, from renewable resources, in that the syngas can be derived from renewable resources, and a significant portion of the molecule is derived from the water used to hydro lyze the olefins. The alternative fuel compositions, and blends thereof with gasoline, can help reduce U.S. dependence on foreign crude oil.

IPC 8 full level

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