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PRODUCTION OF HYDROCRACKED LUBRICANTS

ABSTRACT

5 A process for producing high quality lubricants by
hydrocracking a high boiling hydrocarbon feed in the
presence of hydrogen and a bifunctional hydrocracking
catalyst based on an ultra-large pore crystalline
material. The crystalline material exhibits unusually
large pores of at least 13 Å diameter and a high
sorption capacity demonstrated by its benzene
10 adsorption capacity of greater than 15 grams
benzene/100 grams at 6.7 kPa (50 Torr) and 25°C. The
crystalline material is characterized by an X-ray
diffraction pattern with at least one d-spacing greater
than 18 Å and in a particularly preferred form, a
15 hexagonal arrangement of pores of at least 13 Å
diameter which can be indexed with a d_{100} value greater
than 18 Å. The hydrocracking catalysts based on these
materials are capable of producing hydrocracked lube
products of good viscosity index in high yields without
20 the use of fluorine or other promoters. Petroleum
waxes may be used as the feed and is hydrocracked and
hydroisomerized to form the lube products.