

Abstract

The present invention discloses a catalyst for paraffin isomerization, as well as a preparation method and use thereof. The catalyst comprises a TON molecular sieve modified by rare earth, an inorganic refractory oxide modified by zirconium oxide and a noble metal of group VIII. The weight ratio of the TON molecular sieve modified by rare earth to the inorganic refractory oxides modified by zirconium oxide is 10:90 to 90:10, and the content of the metal of group VIII is 0.1 to 10wt% based on the metal. When used in the process of isomerization dewaxing of various raw materials containing paraffins, the catalyst can not only decrease the solidifying points of raw oil containing paraffins, but also increase the yield of liquid products. Particularly, when used in the process of isomerization dewaxing of lubricating oil distillates, the catalyst is advantageous in producing base oil for lubricating oil with a high a higher yield, a lower pour point (solidifying point) and a higher viscosity index.