ABSTRACT

The present invention relates to a heavy oil catalytic cracking catalyst and preparation method thereof. The catalyst comprises 2 to 50% by weight of an ultra-stable rare earth type Y molecular sieve, 0.5 to 30% by weight of one or more other molecular sieves, 0.5 to 70% by weight of clay, 1.0 to 65% by weight of high-temperature-resistant inorganic oxides, and 0.01 to 12.5% by weight of rare earth oxide. The ultra-stable rare earth type Y molecular sieve is obtained as follows: the raw material, NaY molecular sieve, is subjected to a rare earth exchange and a dispersing pre-exchange, and the molecular sieve slurry is filtered, washed and subjected to a first calcination to produce a "one-exchange one-calcination" rare earth sodium Y molecular sieve, wherein the order of the rare earth exchange and the dispersing pre-exchange is not limited; and the "one-exchange one-calcination" rare earth sodium Y molecular sieve is further subjected to ammonium salt exchange for sodium reduction and a second calcination. The catalyst provided in the present invention is characteristic in its high heavy-oil-conversion capacity, a high total liquid yield and a high light oil yield.