

ABSTRACT

The present invention provides a composite layer agglomerating adsorbent, comprising an outer adsorbent layer containing a low silica X
5 molecular sieve and an inner adsorbent layer containing a high silica X molecular sieve, the low silica X molecular sieve has a silica/alumina molar ratio of 2.07-2.18, the high silica X molecular sieve has a silica/alumina molar ratio of 2.2-2.5, based on the total amount of the adsorbent, the adsorbent comprises 95.0-100 mass% of the X molecular
10 sieve and 0-5.0 mass% of the matrix, the cation sites of the X molecular sieve in the adsorbent are occupied by a metal of Group IIA or occupied together by a metal of Group IA and a metal of Group IIA. The adsorbent is suitable for the process of adsorptive separation of PX from C₈ aromatic hydrocarbons using light aromatic hydrocarbons as desorbent, and has high
15 adsorption selectivity and good mass transfer performance.

No Figure