

Boron trifluoride catalyst complex and method for producing highly reactive isobutene homopolymers

Abstract

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A catalyst complex composed of boron trifluoride and a cocatalyst mixture of 10 to 90% by weight of a monohydric primary C₁- to C₂₀-alcohol and 90 to 10% by weight of a monohydric secondary C₃- to C₂₀-alcohol, where the molar ratio of boron trifluoride to the sum of all alcohols is 2 : 1 to 1 :10. This catalyst complex is used in the preparation of high-reactivity isobutene homopolymers having a number-average molecular weight of 300 to 50 000, using, as the feedstock, a C₄ hydrocarbon mixture comprising at least 20% by weight of isobutene and a total of at least 10% by weight of other C₄ olefins.

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