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Preparation of aliphatic alpha, omega-aminonitriles

Abstract

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Aliphatic alpha,omega-aminonitriles are prepared in the presence of a catalyst which contains

- 10 (a) iron or a compound based on iron or a mixture thereof,
- (b) from 0.01 to 5% by weight, based on (a), of a promoter based on 2, 3, 4 or 5 elements selected from a group consisting of aluminum, silicon, zirconium, titanium and vanadium and
- 15 (c) from 0 to 0.5% by weight, based on (a), of a compound based on an alkali metal or alkaline earth metal, by a process in which the aliphatic alpha,omega-dinitrile used contains 1.0 ppm by weight of more of phosphorus.
- 20 Catalysts are obtainable by the reduction and, if required, subsequent passivation of a magnetite, the catalysts having a BET surface area of from 3 to 10 m²/g, with a total pore volume of from 0.05 to 0.2 ml/g, an average pore diameter of from 0.03 to 0.1 mm [sic] and a pore volume fraction of from 50 to 70% in the
- 25 range of from 0.01 to 0.1 mm [sic].

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