

Abstract

The continuous process for producing a polyamide by reacting at least one aminonitrile
5 with water comprises the following steps:

- (1) reacting at least one aminonitrile with water at a temperature from 90 to 400°C and
a pressure from 0.1 to 15×10^6 Pa in a flow tube containing packing elements of a
Brönsted acid catalyst selected from beta-zeolite, sheet-silicate or titanium dioxide
10 packing elements and metallic packing elements to obtain a reaction mixture,
- (2) further reacting the reaction mixture at from 150 to 400°C and a pressure which is
lower than the pressure in step 1, the temperature and pressure being selected so as
to obtain a first gas phase and a first liquid or a first solid phase or a mixture of first
solid and first liquid phase, and the first gas phase is separated from the first liquid
15 or first solid phase or the mixture of first liquid and first solid phase, and
- (3) admixing the first liquid or the first solid phase or the mixture of first liquid and
first solid phase with a gaseous or liquid phase comprising water at a temperature
from 150 to 370°C and a pressure from 0.1 to 30×10^6 Pa to obtain a product
mixture.