

Abstract

The present invention is directed to a process for producing a polyamide, which process includes directly melt-polymerizing a diamine component including 70 mol% or more of p-xylylenediamine and a dicarboxylic acid component including 70 mol% or more of a C6 to C18 aliphatic dicarboxylic acid, in the absence of solvent in a batch-type reactor equipped with a stirring blade, the process including: (1) reacting the diamine component with the dicarboxylic acid component under a pressure condition of 0.2 to 0.5 MPa (Abs); (2) maintaining a vapor phase section of a reaction tank of the reactor at 200°C or higher during reaction; (3) stirring the contents of the reaction tank, from the start of adding the diamine component until after completion of the addition and before the start of pressure falling, such that the stirring-related Froude number represented by a specific formula is adjusted to 0.0002 to 0.15; and (4) employing a stirring blade having no structural body in the horizontal direction or having a structural body in the horizontal direction, which body does not come into contact with the interface between the reaction mixture and the vapor phase section during stirring. In the polyamide production process, deposition of solid matter in the reaction tank vapor section and in a vapor pipe is suppressed, and incorporation into the product of unmelted solid matter originating from the deposits is reduced.