Claims

1. A polyamide-based polymer of a dicarboxylic acid, a diamine and an aminoalkylcarboxylic acid, wherein itaconic acid is used as the dicarboxylic acid; a diamine represented by formula (I):

$H_2N\text{-}R^1\text{-}NH_2$ (I)

wherein R^1 is an alkylene group having 4 to 12 carbon atoms,
is used as the diamine; and an aminoalkylcarboxylic acid represented by formula (II):

$HOOC\text{-}R^2\text{-}NH_2$ (II)

wherein R^2 is an alkylene group having 8 to 12 carbon atoms,
is used as the aminoalkylcarboxylic acid; a molar ratio of the diamine represented by formula (I) to the aminoalkylcarboxylic acid represented by formula (II) [diamine represented by formula (I)/aminoalkylcarboxylic acid represented by formula (II)] is 15/85 to 55/45; and wherein the amount of the diamine represented by formula (I) per one mole of itaconic acid is one mole.

2. A method for producing the polyamide-based polymer of a dicarboxylic acid, a diamine and an aminoalkylcarboxylic acid, which includes
using itaconic acid as the dicarboxylic acid; a diamine represented by formula (I):

$H_2N\text{-}R^1\text{-}NH_2$ (I)

wherein R^1 is an alkylene group having 4 to 12 carbon atoms,
as the diamine; and an aminoalkylcarboxylic acid represented by formula (II):

$HOOC\text{-}R^2\text{-}NH_2$ (II)

wherein R^2 is an alkylene group having 8 to 12 carbon atoms,
as the aminoalkylcarboxylic acid;
adjusting a molar ratio of the diamine represented by formula (I) to the aminoalkylcarboxylic acid represented by formula (II) [diamine represented by formula (I)/aminoalkylcarboxylic acid represented by formula (II)] to 15/85 to 55/45;
adjusting the amount of the diamine per one mole of itaconic acid to one mole;
carrying out a reaction of itaconic acid with the diamine represented by formula (I) and the aminoalkylcarboxylic acid represented by formula (II); and
carrying out a polymerization of the resulting reaction product.

3. A polyamide-based fiber comprising the polyamide-based polymer as claimed

in claim 1.

4. A molding material comprising the polyamide-based polymer as claimed in claim 1.