

Claims

1. A polyamide mixture comprising:
 - 5 - 80 to 97% by weight of at least one polyamide A), containing repeat units derived from at least one aromatic dicarboxylic acid and at least one aliphatic diamine, wherein the at least one aromatic dicarboxylic acid comprises or consists of terephthalic acid, having a melting temperature T_{m1} , and
 - 10 - 3 to 20% by weight of at least one polyamide B), containing repeat units derived from at least one aromatic dicarboxylic acid and at least one aliphatic diamine, wherein the at least one aromatic dicarboxylic acid comprises or consists of terephthalic acid, having a melting temperature
 - 15 T_{m2} ,

wherein T_{m1} is at least 10°C higher than T_{m2} .
2. The polyamide mixture according to claim 1, wherein T_{m1} is at least 15°C higher than T_{m2} .
3. The polyamide mixture according to claim 1 or 2, wherein the at least one polyamide A) has a melting temperature T_{m1} in the range from 290 to 340°C.
- 25 4. The polyamide mixture according to any of the preceding claims, wherein the at least one polyamide B) has a melting temperature T_{m2} in the range from 250 to 315°C, more preferably 260 to 280°C.
- 30 5. The polyamide mixture according to any of the preceding claims, wherein the at least one polyamide A) and the at least one polyamide B) contain repeat units, derived from at least one aliphatic diamine, independently selected from tetramethylene diamine, pentamethylene diamine, hexamethylene diamine, heptamethylene diamine, octamethylene diamine, nonamethylene diamine, decamethylene diamine, undecamethylene diamine, dodecamethylene diamine,
- 35 2-ethyltetramethylene diamine, 2-methylpentamethylene diamine, 2,2,4-trimethylhexamethylenediamine, 2,4,4-trimethylhexamethylenediamine, 2-methyloctamethylene diamine, 2,4-dimethyloctamethylenediamine, 5-methylnonamethylene diamine and mixtures thereof.

6. The polyamide mixture according to claim 1 or 2, wherein the at least one polyamide A) is selected from PA 6T/6I, PA 6T/DT, PA 4T, and mixtures thereof.
7. The polyamide mixture according to any of the preceding claims, wherein the at least one polyamide B) is selected from PA 8T, PA 9T, PA 10T, PA 6T/66 and mixtures thereof.
8. A polyamide molding composition comprising
 - i) 25 to 100% by weight of at least one polyamide mixture as defined in any of claims 1 to 7,
 - ii) 0 to 75% by weight of at least one filler and reinforcing material,
 - iii) 0 to 50% by weight of at least one additive,where components i) to iii) together add up to 100% by weight.
9. A process for producing a polyamide molding composition, comprising mixing a polyamide composition comprising at least one polyamide A) and a polyamide composition comprising at least one polyamide B), as defined in any of claims 1 to 7, to give a dry blend, wherein the polyamide compositions optionally contain at least one filler and reinforcing material and optionally at least one additive different from fillers and reinforcing materials.
10. A process for producing a polyamide molding composition, comprising melt-blending at least one polyamide A) and at least one polyamide B), as defined in any of claims 1 to 7, optionally at least one filler and reinforcing material and optionally at least one additive different from fillers and reinforcing materials.
11. The process according to claim 10, wherein an extruder is employed and the process comprises the following steps:
 - providing at least one polyamide A) and at least one polyamide B), as defined in any of claims 1 to 7,
 - feeding the polyamide A) in solid form to the intake of the extruder and melting the polyamide A) at a temperature above the melting temperature T_{m1} ,
 - feeding the polyamide B) into the extruder via a side feed at a point downstream the intake where the polymer A) is already in the molten state,

- optionally feeding at least one filler and reinforcing material and/or at least one additive different therefrom into the extruder, where the filler and reinforcing materials and/or additives can be fed to the extruder in one or more portions via the intake and/or at a point downstream the intake.
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12. A molded article produced from a polyamide molding composition according to claim 8 or prepared by a process according to any of claims 9 to 11.
13. The molded article according to claim 12,
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- in the form of a component or as part of a component for the automotive sector,
 - in the form of a component or as part of a component for the heating
 - 15 sector,
 - in the form of a component or as part of a component for the sector of drinking water and industrial process water,
 - 20 - in the form of an electrical or electronic component or a as part thereof,
 - in the form of a component for the kitchen and household sector or a as part thereof.
- 25 14. A process for producing a molded article by subjecting a polyamide molding composition according to claim 8 or prepared by a process according to any of claims 9 to 11 to an injection molding or blow molding.
- 30 15. The use of a polyamide mixture as defined in any of claims 1 to 7 or of a molding composition as defined in claim 8 for production of a molded article with improved mechanical properties, in particular with improved weld line strength.