As enclosed to IPRP

We claim:

1. A polyurea preparable from

   a) a component A comprising

   a1) 5 to 40% by weight of at least one polyetheramine 1 (PEA 1), obtainable from at least one polyetherpolyol 1 (PEP 1) and at least one amine 1, where PEP 1 has an equivalent weight of ≤ 500, and PEA 1 has a nominal functionality of 2,

   a2) 30 to 90% by weight of at least one polyetheramine 2 (PEA 2), obtainable from at least one polyetherpolyol 2 (PEP 2) and at least one amine 2, where PEP 2 has an equivalent weight of > 500, and PEA 2 has a nominal functionality of 2,

   a3) 5 to 30% by weight of at least one amine chain extender

   and

   b) a component B, which is a prepolymer, obtainable from

   b1) at least one polyetherpolyol (PEP 3) and

   b2) at least one isocyanate.

2. The polyurea according to claim 1, wherein the polyurea is in the form of a spray formulation.

3. The polyurea according to claim 1 or 2, wherein a double-metal-cyanide complex catalyst (DMC catalyst) is used for the preparation of PEP 2.

4. The polyurea according to any one of claims 1 to 3, wherein a DMC catalyst is used for the preparation of PEP 3.

5. The polyurea according to any one of claims 1 to 4, wherein an alkali metal hydroxide catalyst (MOH catalyst), in particular a potassium hydroxide catalyst (KOH catalyst), is used for the preparation of PEP 1.

6. The polyurea according to any one of claims 1 to 5, wherein the amine 1 and/or the amine 2 are ammonia.

7. The polyurea according to any one of claims 1 to 6, wherein PEP 1, PEP 2 and/or PEP 3 are a polyoxypropylene polyetherpolyol.

8. The polyurea according to any one of claims 1 to 7, wherein the isocyanate is diphenylmethane diisocyanate (MDI).

9. A process for the preparation of a polyurea according to any one of claims 1 to 8, wherein at least one component A is reacted with at least one component B.

10. The process according to claim 9, which is a spray-formulation process.

Claims

1. A polyurea when prepared from

a) a component A comprising

a1) 5 to 40% by weight of at least one polyetheramine 1 (PEA 1), obtained from at least one polyetherpolyol 1 (PEP 1) and at least one amine 1, where PEP 1 has an equivalent weight of ≤500,

a2) 30 to 90% by weight of at least one polyetheramine 2 (PEA 2), obtained from at least one polyetherpolyol 2 (PEP 2) and at least one amine 2, where PEP 2 has an equivalent weight of > 500,

a3) 5 to 30% by weight of at least one amine chain extender

and

b) a component B, which is a prepolymer, obtained from

b1) at least one polyetherpolyol (PEP 3) and where PEP 3 has an equivalent weight of > 500 and a nominal functionality of 2

b2) at least one isocyanate.

2. The polyurea according to claim 1, wherein the polyurea is in the form of a spray formulation.

3. The polyurea according to claim 1 or 2, wherein a double-metal-cyanide complex catalyst (DMC catalyst) is used for the preparation of PEP 2.

4. The polyurea according to any one of claims 1 to 3, wherein a DMC catalyst is used for the preparation of PEP 3.

5. The polyurea according to any one of claims 1 to 4, wherein an alkali metal hydroxide catalyst (MOH catalyst), in particular a potassium hydroxide catalyst (KOH catalyst), is used for the preparation of PEP 1.

6. The polyurea according to any one of claims 1 to 5, wherein the amine 1 and/or the amine 2 are ammonia.

7. The polyurea according to any one of claims 1 to 6, wherein PEP 1, PEP 2 and/or PEP 3 are a polyoxypropylene polyetherpolyol.

8. The polyurea according to any one of claims 1 to 7, wherein the isocyanate is diphenylmethane diisocyanate (MDI).

9. A process for the preparation of a polyurea according to any one of claims 1 to 8, wherein at least one component A is reacted with at least one component B.

10. The process according to claim 9, which is a spray-formulation process.