WHAT IS CLAIMED IS:

1. A polymer polyol comprising the free-radical polymerization product of:

(A) one or more base polyols;

(B) optionally, one or more preformed stabilizers;

with

(C) one or more ethylenically unsaturated monomers, wherein at least one of said monomers is styrene which contains less than or equal to 1000 ppm of impurities;

in the presence of

(D) at least one free radial polymerization catalyst;

and, optionally,

(E) one or more chain transfer agents.

2. The polymer polyol of Claim 1, wherein said impurities contain at least on compound which is selected from the group consisting of polystyrene, phenylacetylene and divinylbenzene.

3. The polymer polyol of Claim 1, wherein said styrene monomer contains less than 750 ppm of impurities.

4. The polymer polyol of Claim 1, wherein said styrene monomer contains less than or equal to 400 ppm of impurities.

5. The polymer polyol of Claim 1, wherein (C) said one or more ethylenically unsaturated monomers comprises a mixture of styrene monomer and acrylonitrile.

6. The polymer polyol of Claim 1, which comprises (B) one or more preformed stabilizers which is a high potency preformed stabilizer, and said stabilizer is present in an amount of at least about 0.25% by weight, based on the total weight of the polymer polyol.

7. The polymer polyol of Claim 1, wherein said free radical polymerization catalyst is selected from the group consisting of peroxides, persulfates, perborates, percarbonates, azo compounds and mixtures thereof.

8. The polymer polyol of Claim 1, wherein the solids content ranges from greater than about 20% by weight up to about 75% by weight, based on the total weight of the polymer polyol.

9. A process for the preparation of a polymer polyol comprising:

(I) free-radically polymerizing

(A) one or more base polyols;

(B) optionally, one or more preformed stabilizers;

with

(C) one or more ethylenically unsaturated monomers, wherein at least one of said monomers is styrene which contains less than or equal to 1000 ppm of impurities;

in the presence of

(D) at least one free radial polymerization catalyst;

and, optionally,

(E) one or more chain transfer agents.

10. The process of Claim 9, wherein said impurities contain at least one compound which is selected from the group consisting of polystyrene, phenylacetylene and divinylbenzene.

11. The process of Claim 9, wherein said styrene monomer contains less than 750 ppm of impurities.

12. The process of Claim 9, wherein said styrene monomer contains less than or equal to 400 ppm of impurities.

13. The process of Claim 9, wherein (C) said one or more ethylenically unsaturated monomers comprises a mixture of styrene monomer and acrylonitrile.

14. The process of Claim 9, which comprises (B) one or more preformed stabilizers which is a high potency preformed stabilizer, and said stabilizer is present in an amount of at least about 0.25% by weight, based on the total weight of the polymer polyol..

15. The process of Claim 9, wherein said free radical polymerization catalyst is selected from the group consisting of peroxides, persulfates, perborates, percarbonates, azo compounds and mixtures thereof.

16. The process of Claim 9, wherein the solids content ranges from greater than about 20% by weight up to about 75% by weight, based on the total weight of the polymer polyol.

17. A process for preparing a polyurethane foam, comprising reacting

(1) a polyisocyanate

with

(2) an isocyanate-reactive component comprising the polymer polyol of Claim 1,

in the presence of

(3) at least one catalyst,

and

(4) at least one blowing agent.

18. A polyurethane foam comprising the reaction product of

(1) a polyisocyanate,

with

(2) an isocyanate-reactive component comprising the polymer polyol of Claim 1,

in the presence of

(3) at least one catalyst,

and

(4) at least one blowing agent.

CLAIMS

1. An invention not claimed in any divisional application.