What is claimed is:

1. A method for removing a residual mercaptan compound present and causing odor in a polymer product composition, comprising:

providing the polymer product composition already prepared and containing the mercaptan compound as a residual chain transfer agent, which mercaptan compound causes an odor in the polymer product composition;

treating the polymer product composition with additional radical initiator that reacts with the residual mercaptan compound to form a non-odorous compound; and

optionally also treating the polymer product composition with an additional transition metal that immobilizes the mercaptan compound,

wherein the polymer is a polymer grafted polyol.

2. The method according to claim 1, wherein the polymer grafted polyol is selected from the group consisting of a co-polymerized styrene-acrylonitrile grafted polyol (SAN-POP), a polyacrylonitrile grafted polyol and a polyurea grafted polyol.

3. The method according to claim 1 or 2, wherein the polymer is a co-polymerized styrene-acrylonitrile grafted polyol.

4. The method according to any one of claims 1 to 3, wherein the polymer has a viscosity in a range of 500 to 50,000 mPA·s.

5. The method according to any one of claims 1 to 4, wherein the additional radical initiator is selected from the group consisting of organic peroxides and azo compounds.

6. The method according to any one of claims 1 to 5, wherein the additional radical initiator is an aliphatic azo compound.

7. The method according to any one of claims 1 to 5, wherein the additional radical initiator is selected from the group consisting of ethyl hydroperoxide, di-tert-butyl peroxide, tert-butyl

hydroperoxide, tert-amyl hydroperoxide, benzoyl peroxide, methyl ethyl ketone peroxide, methyl isobutyl ketone peroxide, acetyl acetone peroxide, diacetyl peroxide and mixtures thereof.

8. The method according to any one of claims 1 to 5, wherein the additional radical initiator is azobisisobutyronitrile (AIBN) or di-tert-butyl peroxide.

9. The method according to any one of claims 1 to 8, wherein the additional transition metal is selected from the group consisting of titanium, chromium, manganese, copper, iron, zinc, cobalt, nickel, zirconium, silver, platinum and gold.

10. The method according to any one of claims 1 to 9, wherein the additional transition metal is copper.

11. The method according to any one of claims 1 to 10, consisting of:

providing the polymer product composition already prepared and containing the mercaptan compound as a residual chain transfer agent, which mercaptan compound causes an odor in the polymer product composition; and

treating the polymer product composition with the additional radical initiator that reacts with the mercaptan compound to form a non-odorous compound.

12. The method according to any one of claims 1 to 10, further comprising:

treating the polymer product composition with the additional transition metal that immobilizes the mercaptan compound.

13. The method according to any one of claims 1 to 10, consisting of:

providing the polymer product composition already prepared and containing the mercaptan compound as a residual chain transfer agent, which mercaptan compound causes an odor in the polymer product composition;

treating the polymer product composition with the additional radical initiator that reacts with the mercaptan compound to form a non-odorous compound; and

treating the polymer product composition with the additional transition metal that immobilizes the mercaptan compound.

14. The method according to claim 12, where the polymer product composition is contacted with the additional radical initiator before being contacted with the additional transition metal.

15. The method according to claim 12, where the polymer product composition is contacted with the additional transition metal before being contacted with the additional radical initiator.

16. The method according to claim 12, wherein the polymer product composition is contacted with the additional radical initiator and the additional transition metal at the same time.

17. The method according to any one of claims 1 to 16, wherein the polymer product composition and the additional radical initiator are maintained together at a temperature between 50 and 150° C.

18. The method according to any one of claims 1 to 16, wherein the polymer product composition and additional transition metal are maintained together at a temperature between 50 and 150° C.

19. The method according to any one of claims 1 to 18, wherein the residual mercaptan compound is a C_4-C_{16} alkyl mercaptan compound.

20. The method according to any one of claims 1 to 18, wherein the residual mercaptan compound is a chain transfer agent.