What is claimed is:

1. A method for removing a mercaptan compound present in a polymer composition, comprising at least one of:

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

contacting the polymer composition with a transition metal that immobilizes the mercaptan compound.

2. The method according to claim 1, wherein the polymer is a polymer grafted polyol.

3. The method according to claim 2, wherein 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.

4. The method according to any one of claims 1 to 3, wherein the polymer is a co-polymerized styrene-acrylonitrile grafted polyol.

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

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

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

8. The method according to any one of claims 1 to 6, wherein the radical initiator 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.

9. The method according to any one of claims 1 to 6, wherein the radical initiator is azobisisobutyronitrile (AIBN) or di-tert-butyl peroxide.

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

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

12. The method according to any one of claims 1 to 11, comprising:

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

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

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

14. The method according to any one of claims 1 to 11, comprising:

contacting the polymer composition with a transition metal that immobilizes the mercaptan compound.

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

contacting the polymer composition with a transition metal that immobilizes the mercaptan compound.

16. The method according to any one of claims 1 to 11, comprising:

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

contacting the polymer composition with a transition metal that immobilizes the mercaptan compound.

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

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

contacting the polymer composition with a transition metal that immobilizes the mercaptan compound.

18. The method according to claim 16, where the polymer composition is contacted with the radical initiator before being contacted with the transition metal.

19. The method according to claim 16, where the polymer composition is contacted with the transition metal before being contacted with the radical initiator.

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

21. The method according to any one of claims 1 to 20, wherein the polymer composition and the radical initiator are maintained together at a temperature between 50 and 150° C.

22. The method according to any one of claims 1 to 20, wherein the polymer composition and transition metal are maintained together at a temperature between 50 and 150° C.

23. The method according to any one of claims 1 to 22, wherein the mercaptan compound is present in a residual amount from a prior step to prepare the polymer composition.

24. The method according to any one of claims 1 to 23, wherein the mercaptan compound is a C_4-C_{16} alkyl mercaptan compound.

25. The method ~~of~~ according to any one of claims 1 to 23, wherein the mercaptan compound is a chain transfer agent.

26. A method for deodorizing a mercaptan odor from a polymer composition, comprising at least one of:

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

contacting the polymer composition and a transition metal that immobilizes a mercaptan compound.