What is claimed is:

1. A coated expanded polystyrene comprising an expanded polystyrene having at least one organic compound operably bound to an outer surface of the expanded polystyrene and substantially coating the outer surface of the expanded polystyrene.

2. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is selected from pesticides, insecticides, termiticides, fungicides, moldicides, bactericides, mildewicides and combinations thereof.

3. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is a termiticide.

4. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is imidacloprid or imidacloprid containing mixtures.

5. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is in a form selected from a powder, a liquid, an emulsion, and an immiscible concentrate.

6. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is bound to the outer surface of the expanded polystyrene through an electrostatic interaction.

7. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is provided in an amount sufficient to kill a pest that comes into contact with the coated expanded polystyrene.

8. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is from about 0.01 wt./vol.% to about 1.0wt./vol.% of the expanded polystyrene.

9. The coated expanded polystyrene of claim 1, wherein the at least one organic compound is from about 0.01 wt/vol.% up to about 0.15 wt/vol.% of the expanded polystyrene.

10. The expanded polystyrene of claim 1, wherein the expanded polystyrene is expandable polystyrene 10 beads.

11. The expanded polystyrene of claim 1, wherein the expanded polystyrene is substantially resistant to pests.

12. The expandable polystyrene of claim 1, wherein the expanded polystyrene is substantially resistant to termites.

13. A method for producing an expanded polystyrene foam comprising:

contacting expandable polystyrene with at least one organic compound in a concentration sufficient to coat an outer surface of the expandable polystyrene when expanded;

mixing the at least one organic compound with the expandable polystyrene to form a mixture; and

exposing the mixture to conditions such that the polystyrene expands to form a coated expanded polystyrene.

14. The method of claim 13, wherein the steps of exposing further comprises providing steam heat and, optionally, pressure to the mixture.

15. The method of claim 13, wherein the at least one organic compound becomes operably bound to the expandable polystyrene when the expandable polystyrene is exposed to conditions that induce expanding.

16. The method of claim 13, wherein the organic compound becomes bound to the expandable polystyrene by an electrostatic interaction polystyrene when the expandable polystyrene is exposed to conditions that induce expanding.

17. The method of claim 13, wherein the organic compound is selected from pesticides, insecticides, termiticides, fungicides, moldicides, bactericides, mildewicides and combinations thereof.

18. The method of claim 13, wherein the at least one organic compound is added in a form selected from a powder, a liquid, an emulsion, and an immiscible concentrate.

19. The method of claim 13, further comprising preparing a molded article from the coated expanded polystyrene.

20. An expanded polystyrene molded article prepared from a method comprising:

contacting expandable polystyrene with at least one organic compound in a concentration sufficient to coat the expandable polystyrene when expanded;

mixing the at least one organic compound with the expandable polystyrene to form a mixture;

exposing the mixture to conditions such that the polystyrene beads expand to form a coated expanded polystyrene; and

preparing a molded article from the coated expanded polystyrene

21. The molded article of claim 20, wherein the organic compound is selected from pesticides, insecticides, termiticide, fungicides, moldicides, bactericides, mildewicides and combinations thereof.

22. The molded article of claim 20, wherein the at least one organic compound is a termiticide.

23. The molded article of claim 20, wherein the at least one organic compound is imidacloprid or imidacloprid containing mixtures.

24. The molded article of claim 20, wherein the at least one organic compound is in a form selected from a powder, a liquid, an emulsion, and an immiscible concentrate.

25. The molded article of claim 20, wherein the molded article is substantially resistant to pests.

26. The molded article of claim 20, wherein the molded article is substantially resistant to termites.

27. The molded article of claim 20, wherein the molded article is selected from polystyrene foam insulation, polystyrene foam board, polystyrene foam packaging, and polystyrene foam coatings.

Claims

1. A method for producing an expanded polystyrene composition comprising:

providing expandable polystyrene and imidacloprid;

in a feed hopper mixing the imidacloprid with the expandable polystyrene to form a mixture; and

in an expansion vessel, expanding the mixture by exposing the mixture to heat, thereby forming the expanded polystyrene,

wherein the imidacloprid is operably bound to and coats the outer surface of the expanded polystyrene, and

wherein the imidacloprid is present in the expanded polystyrene in an amount of from 0.01 wt/vol.% (lbs/ft^3) to less than 0.08 wt/vol.% (lbs/ft^3).

2. The method of claim 1, wherein said heat is via steam heat.

3. The method of claim 1 or 2, wherein the imidacloprid is added in powder form.

4. The method of any one of claims 1 to 3, further comprising: molding the expanded polystyrene into an article.