WE CLAIM:

1. A polymer composition for coating expanded polystyrene (EPS), comprising:

a mixture ~~of~~ comprising at least ~~one~~ two of a polyurea, a polyurethane, a silicon elastomer, and a combination thereof ~~in a predefined ratio~~,

wherein the mixture comprises at least one of: (a) the polyurea and the polyurethane in ~~the~~ a first predefined ratio of 60:40 to 80:20, by weight, and (b) the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a second predefined ratio of 60:37:03 to 78:19:03, by weight.

2. The polymer composition as claimed in claim 1, wherein the mixture comprises the polyurea and the polyurethane in ~~the~~ a third predefined ratio of 65:35, by weight.

3. The polymer composition as claimed in claim 1, wherein the mixture comprises the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a third predefined ratio of 65:32:03, by weight.

4. The polymer composition as claimed in claim 1, wherein the mixture ~~of~~ comprises the polyurea and the polyurethane in the first predefined ratio of 60:40 to 80:20, by weight, and is configured to impart flexural strength and elongation strength to the EPS.

5. The polymer composition as claimed in claim 1, wherein the mixture ~~of~~ comprises the polyurea, the polyurethane, and the silicon elastomer in the second predefined ratio of 60:37:03 to 78:19:03, by weight, and is configured to impart an anti-static property along with flexural strength and elongation strength to the EPS.

6. A process for coating a molten polymer composition onto an expanded polystyrene (EPS), comprising:

heating a mixture ~~of~~ comprising at least ~~one~~ two of a polyurea, a polyurethane, a silicon elastomer, and a combination thereof ~~in a predefined ratio~~ at 70° C to 85 °C to obtain the molten polymer composition ~~in a molten state~~,

wherein the mixture comprises at least one of: (a) the polyurea and the polyurethane in ~~the~~ a first predefined ratio of 60:40 to 80:20, by weight, and (b) the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a second predefined ratio of 60:37:03 to 78:19:03, by weight;

coating the EPS with the molten polymer composition to form a layer of a predefined thickness on a surface of the EPS~~, wherein the coating of molten polymer composition being performed using matrix coating process~~; and

drying the coating on the surface of the EPS ~~at a room temperature~~.

7. The process as claimed in claim 6, wherein the mixture comprises the polyurea and the polyurethane in a third ~~the~~ predefined ratio of 65:35, by weight.

8. The process as claimed in claim 6, wherein the mixture comprises the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a third predefined ratio of 65:32:03, by weight.

9. The process as claimed in claim 6, wherein the mixture ~~of~~ comprises the polyurea and the polyurethane in the first predefined ratio of 60:40 to 80:20, by weight, and is configured to impart flexural strength and elongation strength to the EPS.

10. The process as claimed in claim 6, wherein the ~~layer of predefined thickness formed~~ mixture ~~of~~ comprises the polyurea, the polyurethane, and the silicon elastomer in the second predefined ratio of 60:37:03 to 78:19:03, by weight, and is configured to impart an anti-static ~~static~~ property along with flexural strength and elongation strength to the EPS.

11. The process as claimed in claim 6, wherein the ~~spraying~~ coating ~~of~~ the EPS with molten polymer composition ~~on the surface of the EPS~~ is carried out using a gun controlled by ~~one of a manual spray method and~~ a robotic arm.

12. The process as claimed in claim 6, wherein the layer of the predefined thickness ~~of the layer of the polymer composition~~ is uniform over the surface of the EPS.

13. The process as claimed in claim 6, wherein the layer of the predefined thickness ~~of the layer of the polymer composition~~ is varied ~~variable~~ over the surface of the EPS.

14. The process as claimed in claim 6, wherein the layer of the predefined thickness ~~of the layer of the polymer composition~~ that is coated on the surface of the EPS ranges from 0.5 mm to 1 mm.

15. An expanded polystyrene (EPS), comprising:

a layer of a predefined thickness of a polymer composition coated on a surface of the EPS, wherein the polymer composition comprises:

a mixture ~~of~~ comprises at least ~~one~~ two of a polyurea, a polyurethane, a silicon elastomer, and a combination thereof ~~in a predefined ratio~~,

wherein the mixture comprises at least one of: (a) the polyurea and the polyurethane in ~~the~~ a first predefined ratio of 60:40 to 80:20, by weight, and (b) the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a second predefined ratio of 60:37:03 to 78:19:03, by weight.

16. The ~~polystyrene~~ EPS as claimed in claim 15, wherein the mixture comprises the polyurea and the polyurethane in a third ~~the~~ predefined ratio of 65:35, by weight.

17. The ~~polystyrene~~ EPS as claimed in claim 15, wherein the mixture comprises the polyurea, the polyurethane, and the silicon elastomer in ~~the~~ a third predefined ratio of 65:32:03, by weight.

18. The ~~polystyrene~~ EPS as claimed in claim 15, wherein the layer of the predefined thickness of the polymer composition ~~formed by the mixture~~comprises ~~of~~ the polyurea and the polyurethane in the first predefined ratio of 60:40 to 80:20, by weight, and is configured to impart flexural strength and elongation strength to the EPS.

19. The ~~polystyrene~~ EPS as claimed in claim 15, wherein the layer of the predefined thickness of the polymer composition ~~formed by the mixture~~comprises ~~of~~ the polyurea, the polyurethane, and the silicon elastomer in the second predefined ratio of 60:37:03 to 78:19:03, by weight, and is configured to impart an anti-static property along with flexural strength and elongation strength to the EPS.

20. The ~~polystyrene~~ EPS as claimed in claim 15, wherein the layer of the predefined thickness of the ~~layer of the~~ polymer composition coated on the surface of the EPS ranges from 0.5 mm to 1 mm.