WHAT IS CLAIMED

1. A butyl rubber latex composition comprising a butyl rubber ionomer made from a halogenated butyl rubber reacted with a nitrogen or phosphorous based nucleophile emulsified in water.
2. The composition according to claim 1, wherein the composition further comprises a surfactant concentration in the range of from 1 to 30 wt%.
3. The composition according to claim 2, wherein the ionomeric content of the ionomer is greater than 0.1 mol%.
4. The composition according to claim 2, wherein the emulsion is stable at room temperature.
5. The composition according to claim 2, wherein the emulsion has a solids content in the range of from 7 to 80 wt%.
6. A butyl rubber latex composition comprising a butyl rubber ionomer made from a halogenated butyl rubber reacted with a nitrogen or phosphorous based nucleophile having an ionomeric content of greater than 0.1 mol% emulsified in water to form a stable emulsion at room temperature having a solids content in the range of from 7 to 80 wt%.
7. The composition according to claim 6, wherein the surfactant concentration of the ionomer is in the range of from 1 to 30 wt%.
8. A process for making a butyl rubber latex composition comprising:
   a. preparing a first solution of a butyl rubber ionomer comprising a nitrogen or phosphorous based nucleophile in a polar organic solvent and adding a fatty acid to the solution;
   b. preparing a second solution of water having a basic pH and a surfactant; and,
   c. mixing the first and second solutions to form a latex emulsion.
9. The process according to claim 8, wherein the ionomer has an ionomeric content of greater than 0.1 mol%
10. The process according to claim 8, wherein the emulsion is stable at room temperature
11. The process according to claim 8, wherein the emulsion has a solids content of from 7 to 80 wt%.

12. The process according to claim 8, wherein the second solution comprises a basic amine.
13. The process according to claim 12, wherein the basic amine comprises an aminoalcohol.
14. The process according to claim 8, wherein the surfactant in the second solution is present in a concentration of from 1 to 30 wt%.
15. The process according to claim 8, wherein the polar solvent is halogenated.
16. The process according to claim 15, wherein the polar solvent comprises chloromethane, dichloromethane or chloroform.
17. The composition according to claim 2, wherein the composition further comprises a high aspect ratio filler.
18. The composition according to claim 6, wherein the composition further comprises a high aspect ratio filler.
19. The process according to claim 8, wherein the process further comprises mixing a high aspect ratio filler with the butyl ionomer prior to preparing the first solution.

CLAIMS

1. A butyl rubber latex composition comprising a butyl rubber ionomer made from a halogenated butyl rubber reacted with a nitrogen or phosphorous based nucleophile, and emulsified in water in the presence of a fatty acid-based surfactant and another surfactant.

2. The composition according to claim 1, wherein the composition further comprises a surfactant concentration in the range of from 1 to 30 wt %.

3. The composition according to claim 2, wherein the ionomeric content of the ionomer is greater than 0.1 mol %.

4. The composition according to claim 2, wherein the emulsion is stable at room temperature.

5. The composition according to claim 2, wherein the emulsion has a solids content in the range of from 7 to 80 wt %.

6. A butyl rubber latex composition comprising a butyl rubber ionomer made from a halogenated butyl rubber reacted with a nitrogen or phosphorous based nucleophile, the ionomer having an ionomeric content of greater than 0.1 mol % and is emulsified in water in the presence of a fatty acid surfactant and another surfactant to form a stable emulsion at room temperature, wherein the emulsion has a solids content in the range of from 7 to 80 wt %.

7. The composition according to claim 6, wherein the composition comprises a surfactant concentration in the range of from 1 to 30 wt %.

8. A process for making a butyl rubber latex composition comprising:

a. preparing a first solution of a butyl rubber ionomer comprising a nitrogen or phosphorous based nucleophile in a polar organic solvent and adding a fatty acid-based surfactant to the solution;

b. preparing a second solution of water having a basic pH and another surfactant; and,

c. mixing the first and second solutions to form a latex emulsion.

9. The process according to claim 8, wherein the ionomer has an ionomeric content of greater than 0.1 mol %.

10. The process according to claim 8, wherein the emulsion is stable at room temperature.

11. The process according to claim 8, wherein the emulsion has a solids content of from 7 to 80 wt %.

12. The process according to claim 8, wherein the second solution comprises a basic amine.

13. The process according to claim 12, wherein the basic amine comprises an aminoalcohol.

14. The process according to claim 8, wherein the surfactant in the second solution is present in a concentration of from 1 to 30 wt %.

15. The process according to claim 8, wherein the polar solvent is halogenated.

16. The process according to claim 15, wherein the polar solvent comprises chloromethane, dichloromethane or chloroform.

17. The composition according to claim 2, wherein the composition further comprises a high aspect ratio filler.

18. The composition according to claim 6, wherein the composition further comprises a high aspect ratio filler.

19. The process according to claim 8, wherein the process further comprises mixing a high aspect ratio filler with the butyl rubber ionomer prior to preparing the first solution.