

Claims:

1. Use of an aqueous polymer latex as a binder or co-binder in a waterborne coating composition, which contains a titanium dioxide pigment,
5 wherein the aqueous polymer latex is obtained by polymerizing a monomer composition M by radical emulsion polymerization, wherein the monomer composition M comprises:
- a) ≥ 40.0 wt.% to ≤ 80 wt.% of t-butyl acrylate or t-butyl methacrylate;
b) ≥ 20 wt.% to ≤ 59.8 wt.% of n-butyl acrylate,
10 c) ≥ 0.1 wt.% to ≤ 3.0 wt.% of at least one mono-ethylenically unsaturated carboxylic acid having 3 to 6 carbon atoms;
d) ≥ 0.1 wt.% to ≤ 3.0 wt.% acrylamide and/or meth acrylamide derivatives;
2. The use according to claim 1 comprises 0.1 to 20 wt.% of at least one non-ionic monomer e), which is different from monomers a) to d).
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3. The use according to any of claims 1 to 2, wherein the monomer c) is selected from the group consisting of acrylic acid and methacrylic acid.
- 20 4. The use according to any of claims 1 to 3, wherein the monomer c) is present in an amount in the range of ≥ 0.5 wt.% to ≤ 2.0 wt.%.
5. The use according to any of claims 1 to 4, wherein the meth acrylamide derivative is selected from the group consisting of N-methyl acrylamide, N-ethyl acrylamide, N-propyl acrylamide, N-isopropyl acrylamide, N-butyl acrylamide, N-methyl meth acrylamide, N-ethyl meth acrylamide, N-propyl meth acrylamide, N-isopropyl meth acrylamide and N-butyl meth acrylamide.
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6. The use according to any of claims 1 to 5, wherein the monomer d) is present in an amount in the range of ≥ 0.5 wt.% to ≤ 2.0 wt.%.
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7. The use according to any of claims 1 to 6, wherein the monomer a) and b) together in the range of 90.0 to 99.8 wt. %, based on the total weight of the monomers together.
- 35 8. The use according to any of claims 1 to 7, wherein the monomer composition M comprises
a) ≥ 40 wt.% to ≤ 80 wt.% tert-butyl acrylate
b) ≥ 20 wt.% to ≤ 59 wt.% n-butyl acrylate;
c) ≥ 0.5 wt.% to ≤ 1.5 wt.% acrylic acid; and
40 d) ≥ 0.5 wt.% to ≤ 1.5 wt.% acrylamide,
with proviso a) and b) together in the range of 90 to 99.8 wt. %, based on total weight of the monomer together.

9. An aqueous coating composition comprising:
i) at least one an aqueous polymer latex as a binder or co-binder,
wherein the aqueous polymer latex is obtained by polymerizing a monomer composition M
by radical emulsion polymerization, wherein the monomer composition M comprises:
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- e) ≥ 40.0 wt.% to ≤ 80 wt.% of t-butyl acrylate or t-butyl methacrylate;
f) ≥ 20 wt.% to ≤ 59.8 wt.% of n-butyl acrylate,
g) ≥ 0.1 wt.% to ≤ 3.0 wt.% of at least one mono-ethylenically unsaturated carboxylic
acid having 3 to 6 carbon atoms;
10 h) ≥ 0.1 wt.% to ≤ 3.0 wt.% acrylamide and/or meth acrylamide derivatives; and
iii) a titanium dioxide pigment.
10. An aqueous polymer latex which is obtained by polymerizing a monomer composition M by
radical emulsion polymerization, wherein the monomer composition M comprises:
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- a) ≥ 40.0 wt.% to ≤ 80 wt.% of t-butyl acrylate or t-butyl methacrylate;
b) ≥ 20 wt.% to ≤ 59.8 wt.% of n-butyl acrylate,
c) ≥ 0.1 wt.% to ≤ 3.0 wt.% of at least one mono-ethylenically unsaturated carboxylic
acid having 3 to 6 carbon atoms;
20 d) ≥ 0.1 wt.% to ≤ 3.0 wt.% acrylamide and/or meth acrylamide derivatives.
11. The aqueous polymer latex according to claim 10 comprises 0.1 to 20 wt.% of at least
one non-ionic monomer e), which is different from monomers a) to d).
12. The aqueous polymer latex according to any of claims 10 to 11, wherein the mono-
25 mer c) is selected from the group consisting of acrylic acid and methacrylic acid.
13. The aqueous polymer latex according to any of claims 10 to 12, wherein the monomer
c) is present in an amount in the range of ≥ 0.5 wt.% to ≤ 2.0 wt.%.
14. The aqueous polymer latex according to any of claims 10 to 13, wherein the meth
acrylamide derivative is selected from the group consisting of N-methyl acrylamide, N-ethyl
acrylamide, N-propyl acrylamide, N-isopropyl acrylamide, N-butyl acrylamide, N-methyl
meth acrylamide, N-ethyl meth acrylamide, N-propyl meth acrylamide, N-isopropyl meth
acrylamide and N-butyl meth acrylamide.
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15. The aqueous polymer latex according to any of claims 10 to 14, wherein the monomer
d) is present in an amount in the range of ≥ 0.5 wt.% to ≤ 2.0 wt.%.
16. The use according to any of claims 10 to 15, wherein the monomer a) and b) together
40 in the range of 90.0 to 99.8 wt. %, based on the total weight of the monomers together.
17. The aqueous polymer latex according to any of claims 10 to 18, wherein the monomer
composition M comprises

- 5 a) ≥ 40 wt.% to ≤ 80 wt.% tert-butyl acrylate
b) ≥ 20 wt.% to ≤ 59.8 wt.% n-butyl acrylate;
c) ≥ 0.5 wt.% to ≤ 1.5 wt.% acrylic acid; and
d) ≥ 0.5 wt.% to ≤ 1.5 wt.% acrylamide,
with proviso that the monomer a) and b) together in the range of 90.0 to 99.8 wt. %, based
on the total weight of the monomers together.