WHAT IS CLAIMED IS:

1. A matting agent comprising:

silica particles having a particle surface; and

greater than 30.0 weight percent (wt%), based on a total weight of said silica particles, of (i) one or more waxes, (ii) one or more polymers, or (iii) any combination of (i) and (ii) coated on said particle surface.

2. The matting agent of claim 1, wherein said silica particles comprise 31.0 wt% to about 50.0 wt%, based on a total weight of said silica particles, of (i) said one or more waxes, (ii) said one or more polymers, or (iii) any combination of (i) and (ii) on said particle surface, preferably from about 40.0 wt% to about 50.0 wt%, based on a total weight of said silica particles, of (i) said one or more waxes, (ii) said one or more polymers, or (iii) any combination of (i) and (ii) on said particle surface.

3. The matting agent of claim 1, wherein said silica particles comprise silica gel, precipitated silica or fumed silica particles.

4. The matting agent of claim 1, wherein said silica particles have a total pore volume of from about 0.30 cc/gm to about 2.20 cc/gm, as determined by Barrett-Joyner-Halenda (BJH) method, preferably of from about 0.40 cc/gm to about 2.20 cc/gm, more preferred of from about 1.8 cc/gm to about 2.0 cc/gm.

5. The matting agent of claim 1, wherein the silica particles have a BET particle surface area of at least about 100 $m^2$/g up to 1500 $m^2$/g, or greater, preferably of at least about 200 $m^2$/g up to 900$m^2$/g.

6. The matting agent of claim 1, wherein said coated silica particles have an average particle size of from about 1.0 micron (µm) to about 50 µm.

7. The matting agent of claim 1, wherein said coated particles comprise said one or more waxes, wherein said one or more waxes preferably comprise a hydrocarbon wax, a paraffin wax, a polyethylene wax, a polypropylene wax, a plant wax, an animal wax, or any combination thereof, wherein said one or more waxes more preferred comprise a polyethylene wax, a polypropylene wax, or a combination thereof, wherein said one or more waxes in particular comprise a polyethylene wax having an average molecular weight of at least 2000.

8. The matting agent of claim 1, wherein said coated particles comprise one or more polymers, wherein said one or more polymers preferably comprise polydiene, vulcanized polydiene, polyacrylamide, polyvinyl polypyrrolidone, cellulose acetate butyrate, or any combination thereof, wherein said one or more polymers more preferred comprise polydiene, vulcanized polydiene, or any combination thereof, wherein said one or more polymers in particular comprise vulcanized polydiene.

9. The matting agent of claim 1, wherein said coated particles are free-flowing particles.

10. The matting agent of claim 1, when incorporated into a coating composition and applied onto a substrate, enables the coating composition to form a film having a film clarity $\Delta L^*$ of less than 7.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, or

when incorporated into a coating composition and applied onto a substrate, enables the coating composition to exhibit a water damage 24 hr $\Delta L^*$ of less than 5.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, or

when incorporated into a coating composition and applied onto a substrate, enables the coating composition to exhibit a 50/50 water/ethanol damage 1 hr $\Delta L^*$ of less than 8.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, or

when incorporated into a coating composition and applied onto a substrate, enables the coating composition to exhibit a 50/50 water/ethanol damage 4 hr ΔL* of less than 16.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, or

when incorporated into a coating composition and applied onto a substrate, enables the coating composition to exhibit (i) a film clarity ΔL* of less than 7.0 units, (ii) exhibits a water damage 24 hr ΔL* of less than 4.0 units, (iii) a 50/50 water/ethanol damage 1 hr ΔL* of less than 8.0 units, and (iv) a 50/50 water/ethanol damage 4 hr ΔL* of less than 10.0 units, all measured using a portable Spectro-Guide 45/0 colorimeter.

11. A method of preparing the matting agent of claim 1, said method comprising:

contacting the porous silica particles with (i) the one or more waxes, (ii) the one or more polymers, or (iii) any combination of (i) and (ii) so as to form a coated silica particle.

12. The method of claim 11, wherein said contacting step comprises:

dissolving (i) the one or more waxes, (ii) the one or more polymers, or (iii) any combination of (i) and (ii) in a solvent to form a suspension or dispersion;

incorporating the silica particles into the suspension or dispersion; and removing the solvent from the suspension or dispersion to form coated silica particles, or

wherein said contacting step comprises:

melting (i) the one or more waxes, (ii) the one or more polymers, or (iii) any combination of (i) and (ii) to form a liquid coating; and incorporating the silica particles into the liquid coating to form coated silica particles, or

wherein said contacting step comprises:

simultaneously mixing or milling (a)(i) the one or more waxes, (ii) the one or more polymers, or (iii) any combination of (i) and (ii), and (b) the silica particles with heat to form coated silica particles.

13. The method of claim 12, further comprising:

adding elemental sulfur, a vulcanization promoter, or both to the one or more polymers, wherein the vulcanization promoter preferably comprises elemental sulfur and/or butyl zimate.

14. The method of any one of claims 12 to 13, further comprising:

reducing the particles size of the coated silica particles to obtain particles having a final particle size of less than 100 microns (μm), and preferably further comprising:

forming coated silica particles having a first particle size of less than about 500 microns (μm);

heat treating the coated particles at an elevated temperature for a heat treatment period of time;

allowing the heat-treated coated particles to cool; and

milling the heat-treated coated particles so as to result in a final particle size of less than about 100 μm, wherein said milling step preferably results in coated particles having a final particle size of less than about 45 μm,

wherein the coated particles are heat treated at elevated temperature ranges from about 90°C to about 140°C, and the heat treatment period of time ranges from about 1.0 hour (hr) to about 4.0 hr, and

wherein preferably one or more waxes are present, and the elevated temperature ranges from about 100°C to about 130°C, and the heat treatment period of time ranges from about 1.0 hr to about 1.5 hr, or

wherein one or more polymers are present, and the elevated temperature ranges from about 90°C to about 100°C, and the heat treatment period of time ranges from about 2.5 hr to about 3.5 hr.

15. A coating composition comprising the matting agent of any one of claims 1, 3, 7 and 8, wherein said composition comprises an aqueous composition.

16. A substrate coated with the coating composition of claim 15, wherein said substrate preferably comprises a wood substrate.

17. A method of improving chemical resistance, thermal stress resistance, weather resistance, film clarity, or any combination thereof, of a waterborne composition applied to a wood substrate, said method comprising:

incorporating the matting agent of claim 1 into the coating composition;

applying the coating composition onto at leat one surface of a wood substrate to form a coating;

and drying the coating to form a film on at least one surface of the wood substrate.

18. The method of claim 17, wherein the film exhibits a film clarity $\Delta L^*$ of less than 7.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

wherein film exhibits a water damage 24 hr $\Delta L^*$ of less than 5.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

wherein film exhibits a 50/50 water/ethanol damage 1 hr $\Delta L^*$ of less than 8.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

wherein the film exhibits a 50/50 water/ethanol damage 4 hr ΔL* of less than 16.0 units as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

wherein the film exhibits (i) a film clarity ΔL* of
less than 7.0 units, (ii) exhibits a water damage 24 hr ΔL* of less than 4.0 units, (iii) a 50/50 water/ethanol damage 1 hr ΔL* of less than 8.0 units, and (iv) a 50/50 water/ethanol damage 4 hr ΔL* of less than 10.0 units, all measured using a portable Spectro-Guide 45/0 colorimeter.