WHAT IS CLAIMED IS:

1. A matting agent for aqueous coating compositions comprising composite silica particles, said composite silica particles comprising:

(a) porous silica particles; and

(b) one or more waxes in an amount sufficient to at least partially fill pores of the porous silica particle such that the composite silica particles have a total pore volume of less than 0.20 cc/g as determined by Barrett-Joyner-Halenda (BJH) method and a final particle surface area of less than 10.0 meters squared per gram (m^2/g) as determined by Brunauer Emmet Teller (BET) nitrogen adsorption method.

2. The matting agent of claim 1, wherein the porous silica particles have an initial pore volume of from ~~about~~ 0.20 cc/g to ~~about~~ 2.50 cc/g as determined by Barrett-Joyner-Halenda (BJH) method.

3. The matting agent of claim 1 or 2, wherein the porous silica particles have an initial particle surface area of from ~~about~~ 100 m^2/g to ~~about~~ 1000 m^2/g as determined by the BET nitrogen adsorption method, wherein the porous silica particles preferably have an initial particle surface area of from ~~about~~ 200 m^2/g to ~~about~~ 800 m^2/g as determined by the BET nitrogen adsorption method.

4. The matting agent of any one of claims 1 to 3, wherein said composite silica particles comprise from ~~about~~ 15.0 wt% to less than ~~about~~ 65.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles.

5. The matting agent of any one of claims 1 to 4, wherein

a) the porous silica particles have an initial pore volume of from ~~about~~ 1.70 cc/g to ~~about~~ 2.20 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from ~~about~~ 55.0 wt% to ~~about~~ 65.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particle~~s~~; or

b) the porous silica particles have an initial pore volume of from ~~about~~ 1.20 cc/g to ~~about~~ 1.70 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from ~~about~~ 45.0 wt% to ~~about~~ 55.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles; or

c) wherein the porous silica particles have an initial pore volume of from ~~about~~ 1.00 cc/g to ~~about~~ 1.20 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from ~~about~~ 35.0 wt% to ~~about~~ 45.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles; or

d) wherein the porous silica particles have an initial pore volume of from ~~about~~ 0.60 cc/g to ~~about~~ 1.00 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from ~~about~~ 25.0 wt% to ~~about~~ 35.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles; or

e) wherein the porous silica particles have an initial pore volume of from ~~about~~ 0.30 cc/g to ~~about~~ 0.60 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from ~~about~~ 15.0 wt% to ~~about~~ 25.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles.

6. The matting agent of any one of claims 1 to 5, wherein said composite silica particles have a total pore volume of less than or equal to ~~about~~ 0.19 cc/g, preferably from 0.001 cc/g to ~~about~~ 0.19 cc/g, more preferred from 0.01 cc/g to ~~about~~ 0.05 cc/g, as determined by the BJH method.

7. The matting agent of any one of claims 1 to 6, wherein said composite silica particles have a final particle surface area of from ~~about~~ 1.0 m^2/g to ~~about~~ 9.0 m^2/g, preferably from 2.0 m^2/g to ~~about~~ 8.0 m^2/g, as determined by the BET nitrogen adsorption method.

8. The matting agent of any one of claims 1 to 7, wherein said porous silica particles comprise silica gel, precipitated silica or fumed silica particles.

9. The matting agent of any one of claims 1 to 8, wherein said porous silica particles have a median particle size of from ~~about~~ 1.0 micron (µm) to ~~about~~ 50.0 µm.

10. The matting agent of any one of claims 1 to 9, wherein said one or more waxes 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 preferably comprise a polyethylene wax, a polypropylene wax, or a combination thereof, more preferred comprise a polyethylene wax having an average molecular weight of at least 2000.

11. The matting agent of any one of claims 1 to 10, wherein said composite silica particles are free-flowing particles.

12. The matting agent of any one of claims 1 to 11, wherein when incorporated into a coating composition and applied onto a plain, smooth and non-penetrating black chart, enables the coating composition to form a clear coat film having a 60^o gloss value between ~~about~~ 5.0 and ~~about~~ 25.0, preferably a 60^o gloss value of ~~about~~ 12.5, as measured using a portable Micro-TRI-Gloss meter, wherein

a) the clear coat film exhibits a water damage 24 hr ΔL^* of less than 6.0 units, preferably of less than ~~about~~ 4.1 units, more preferred of less than ~~about~~ 1.5 units, still more preferred of less than ~~about~~ 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

b) the clear coat film preferably exhibits a 50/50 water/ethanol damage 24 hr ΔL^* of less than 6.5 units, more preferred of less than 4.0 units, still more preferred of less than 0.5 units, further more preferred of less than 4.0 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

c) the clear coat film preferably exhibits a 50/50 water/ethanol damage 1 hr ΔL^* of less than 4.0 units, more preferred of less than 1.0 units, still more preferred of less than 1.0 units, further more preferred of less than 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

d) the clear coat film preferably exhibits a 50/50 water/ethanol damage 4 hr ΔL^* of less than 4.5 units, more preferred of less than 1.0 units, still more preferred of less than 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

e) the clear coat film exhibits a film clarity ΔL^* of less than 7.0 units, more

preferred of less than 6.5 units, still more preferred of less than 5.0 units, as measured using a portable Spectro-Guide 45/0 colorimeter.

13. The matting agent of any one of claims 1 to 12, when incorporated into a coating composition and applied onto a substrate, enables the coating composition to exhibit a film clarity ΔL* of less than 7.0 units, preferably of less than 6.5 units, more preferred of less than 5.0 units, as measured using a portable Spectro-Guide 45/0 colorimeter.

14. A method of preparing the matting agent of any one of claims 1 to 13, said method comprising:

contacting porous silica particles with the one or more waxes so as to form the composite silica particles having a total pore volume of less than 0.20 cc/g as determined by the BJH method and a final particle surface area of less than 10.0 meters squared per gram (m^2/g) as determined by Brunauer Emmet Teller (BET) nitrogen adsorption method.

15. The method of claim 14, wherein said contacting step comprises:

a) dissolving or dispersing one or more waxes in a solvent to form a suspension or dispersion;

incorporating the porous silica particles into the suspension or dispersion; and

removing the solvent from the suspension or dispersion to form the composite silica particles; or

wherein said contacting step comprises:

melting one or more waxes to form a molten liquid; and

incorporating the porous silica particles into the molten liquid to form the composite silica particles; or

wherein said contacting step comprises:

simultaneously mixing or milling (a) one or more waxes, and (b) the porous silica particles with heat to form the composite silica particles, and/or

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

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

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

allowing the heat-treated composite silica particles to cool; and

milling the heat-treated composite silica particles so as to result in a final particle size of less than ~~about~~ 100 µm, wherein the composite silica particles preferably are heat treated at an elevated temperature ranging from ~~about~~ 90ºC to ~~about~~ 140ºC, and the heat treatment period of time ranges from ~~about~~ 1.0 hour (hr) to ~~about~~ 4.0 hr, wherein more preferred the elevated temperature ranges from ~~about~~ 100ºC to ~~about~~ 130ºC, and the heat treatment period of time ranges from ~~about~~ 1.0 hr to ~~about~~ 1.5 hr.

16. The method of claim 15b), wherein said reducing step results in composite silica particles having a final particle size of less than ~~about~~ 45.0 µm.

17. A coating composition comprising the matting agent of any one of claims 1 to 16.

18. The coating composition of claim 17, wherein

a) said coating composition comprises an aqueous composition, and/or

b) said coating composition preferably comprises up to ~~about~~ 50 wt% of said matting agent, more preferred from ~~about~~ 2.0 wt% to ~~about~~ 8.0 wt%, based on a total weight of said coating composition, and/or

c) wherein said coating composition, when applied onto a plain, smooth and non-penetrating black chart, forms a film having a 60° gloss value of from ~~about~~ 5.0 to ~~about~~ 25.0, preferably of ~~about~~ 12.5, as measured using a portable Micro-TRI-Gloss meter, and/or

d) wherein the film of claim 18 c) preferably exhibits a water damage 24 hr ΔL* of less than 6.0 units, more preferred of less than ~~about~~ 4.1 units, still more preferred of less than ~~about~~ 1.5 units, further more preferred of less than ~~about~~ 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

e) wherein the film of claim 18 c) or d) preferably exhibits a 50/50 water/ethanol damage 24 hr ΔL* of less than 6.5 units, more preferred of less than 4.0 units, still more preferred of less than 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

f) wherein the film of claim 18 c) or d) exhibits a 50/50 water/ethanol damage 1 hr ΔL* of less than 4.0 units, more preferred of less than 1.0 units, still more preferred of less than 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

g) wherein the film of claim 18 c) or d) preferably exhibits a 50/50 water/ethanol damage 4 hr ΔL* of less than 4.5 units, more preferred of less than 1.0 units, still more preferred of less than 0.5 units, as measured using a portable Spectro-Guide 45/0 colorimeter, and/or

h) wherein the film of claim 18 c) or d) preferably exhibits a film clarity ΔL* of less than 7.0 units, more preferred of less than 6.5 units, still more preferred of less than 5.0 units, as measured using a portable Spectro-Guide 45/0 colorimeter.

19. A substrate coated with the coating composition of claim 18, wherein said substrate preferably comprises a wood substrate.

20. A method of improving chemical resistance of a waterborne composition applied to a wood substrate, said method comprising:

incorporating the matting agent of any one of claims 1 to 13 into the coating composition;

applying the coating composition onto at least 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, wherein said film preferably is a clear coat film.