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 0.20 cc/g to 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 100 m^2/g to 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 200 m^2/g to 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 15.0 wt% to less than 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 1.70 cc/g to 2.20 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from 55.0 wt% to 65.0 wt% of said one or more waxes**,** based on a total weight of said composite silica particles; or

b) the porous silica particles have an initial pore volume of from 1.20 cc/g to 1.70 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from 45.0 wt% to 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 1.00 cc/g to 1.20 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from 35.0 wt% to 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 0.60 cc/g to 1.00 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from 25.0 wt% to 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 0.30 cc/g to 0.60 cc/g as determined by Barrett-Joyner-Halenda (BJH) method, wherein said composite silica particles preferably comprise from 15.0 wt% to 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 0.19 cc/g, preferably from 0.001 cc/g to 0.19 cc/g, more preferred from 0.01 cc/g to 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 1.0 m^2/g to 9.0 m^2/g, preferably from 2.0 m^2/g to 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 1.0 micron (µm) to 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 5.0 and 25.0, preferably a 60^o gloss value of 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 4.1 units, more preferred of less than 1.5 units, still more preferred of less than 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 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 100 µm, wherein the composite silica particles preferably are heat treated at an elevated temperature ranging from 90ºC to 140ºC, and the heat treatment period of time ranges from 1.0 hour (hr) to 4.0 hr, wherein more preferred the elevated temperature ranges from 100ºC to 130ºC, and the heat treatment period of time ranges from 1.0 hr to 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 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 50 wt% of said matting agent, more preferred from 2.0 wt% to 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^{o} gloss value of from 5.0 to 25.0, preferably of 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 4.1 units, still more preferred of less than 1.5 units, further more preferred of less than 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.