IT IS CLAIMED:

1. A method for the suspension of inert colloidal or non-colloidal abrasive or non-abrasive inert particles in a stable aqueous, semi aqueous or organic carrier medium which comprises producing in-situ formed suspending particles, so as to establish an appropriate concentration of suspending particles to inert particles to produce sufficient interference to settling of said inert particles in said carrier medium, said carrier medium comprising a range from 0.1 to 60 % by weight of the suspending particles, which differ from said inert particles, and are selected from the group consisting of alkaline earth metal and transition metal hydroxides, oxy hydroxides, and oxide hydrates that form in-situ said suspending particles within and inclusive of said carrier medium at a pH between 4 and 12, the in situ formation of the suspending particles in the carrier medium resulting in the suspending particles exhibiting substantially uniform properties of having distinctly different molecular, configurational, rheological and physical structures than the carrier medium, a density greater than that of the carrier medium, visually identifiable and separate physical structure than the carrier medium, measureable size differences in a range between approximately 2-3 µm and 500 µm, and containing molecules of the carrier within which the suspending particle was formed but without a capacity for further reaction with the carrier medium, and independent of formation mechanism or origin of components, whereby said inert particles are suspended in said carrier medium by at least one of physical interference between the suspending particles and the inert particles, attracting forces between the suspending particles and the inert particles to provide a proximity for chemical, physical or physicochemical interference, and electrostatic charge repulsion of the suspending particles from the inert particles and themselves, all to prevent agglomeration or coagulation of said inert particles in said carrier medium over an extended period of time.

2. The method of claim 1 wherein said suspending particles are formed in a separate medium from the final carrier medium.

3. The method of claim 1 wherein said aqueous carrier medium contains at least one inert polar solvent.

4. The method of claim 3 wherein said inert polar solvent is selected from the group consisting of dialkylene glycol, alkylene glycol, glycol ether, polyalkylene glycol, alkyl lactone, N-methyl pyrrolidone, alkylene carbonates, acetonitrile, and dimethyl acetamide.

5. The method of claim 1 wherein said suspending particles are gel particles, sol gel particles, and gelatinous precipitates formed from alkaline earth metal or transition metal hydroxides, oxy hydroxides, or oxide hydrates.

6. The method of claim 5 wherein said suspending particles are formed from a member selected from the group consisting of aluminum hydroxide, aluminum oxy hydroxide, zinc hydroxide, copper hydroxide, magnesium hydroxide and tin hydroxide.

7. The method of claim 1 wherein said suspending particles are gel particles, sol gel particles, and gelatinous precipitates formed from alkaline neutralized salts of transition metals formed in an aqueous or caustic media using Bronsted or non-Bronsted base to neutralize in situ salts of Fe, Cr, Al, Zn, Cu, Ni and the like such that the suspending particles are hydrous-oxides of the metal.

8. The method of claim 1 wherein said suspending particles are gel particles, sol gel particles, and gelatinous precipitates formed from modified starches, cellulose derivatives including hydroxyl cellulose, hydroxyl propyl cellulose, methyl carboxymethyl cellulose and acetyl cellulose.

9. The method of claim 1 wherein said suspending particles are gel particles, sol gel particles, and gelatinous precipitates formed from polysaccharides formed outside of the carrier medium including guar, guar gum, agar, agar-guar mixtures, carrageenans, pectins, gellan gum, alginates and metal alginates, plant derived polysaccharides and mixtures thereof.

10. The method of claim 1 wherein said suspending particles are gel particles, sol gel

particles, and gelatinous precipitates formed from polyelectrolytes formed in non-ionic or polar carrier media including sulfonated polystyrene, poly–acrylic acid, methacrylic acid, maleic acid or copolymers thereof, ammonium poly (methacrylate), poly ester amide and co-polymers of poly amines, and poly-(amino acid) polyelectrolytes.

11. The method of claim 1 wherein said inert particles being suspended are selected from the group consisting of titanium dioxide, silicon carbide, zirconium oxide, silica, cerium oxide, aluminum oxide, silicon nitride, boron carbide, tungsten carbide, diamond, silicon dioxide and dry pigment particles.

12. The method of claim 1 including a corrosion inhibitor.

13. A suspending gel particle formed in situ in a stable aqueous, semi-aqueous or organic carrier medium for the suspension of inert colloidal or non-colloidal abrasive or non-abrasive inert particles in said stable carrier medium, said suspending gel particles, which differ from said inert particles, comprising a range from 0.1 to 60 % by weight with said carrier medium so as to establish an appropriate concentration of suspending particles to inert particles to produce sufficient interference to settling of said inert particles in said carrier medium, said suspending gel particles being selected from the group consisting of alkaline earth metal and transition metal hydroxides, oxy hydroxides, and oxide hydrates that form in-situ said suspending particles within and inclusive of said carrier medium at a pH between 4 and 12, the in situ formation of the suspending particles in the carrier medium resulting in the suspending gel particles exhibiting substantially uniform properties of having distinctly separate molecular, configurational, rheological and physical structures than the carrier medium, a density greater than that of the carrier medium, visually identifiable and separate physical structure than the carrier medium, measureable size differences in a range between approximately 2-3 μm and 500 μm, and containing molecules of the carrier within which the suspending particle was formed but without a capacity for further reaction with the carrier medium, and independent of

formation mechanism or origin of components, whereby said inert particles are suspended in said carrier medium by at least one of physical interference between the suspending gel particles and the inert particles, attracting forces between the suspending particles and the inert particles to provide a proximity for chemical, physical or physicochemical interference, and electrostatic charge repulsion of the suspending gel particles from the inert particles and themselves, all to prevent agglomeration or coagulation of said inert particles in said carrier medium over an extended period of time.

14. The suspending gel particles of claim 13 being malleable, flexible separate physical entities from said carrier medium can be mechanically adhered to any of said inert particles within the carrier medium forming a cushion around said inert particle and serving to increase the suspendability of the inert particle within the carrier medium.

15. The suspending gel particles of claim 13 wherein said gel particles will continue to exist only in conditions such that said gel particles remain semi-liquid with the carrier molecules within the gel particle maintained intact.

16. The suspending gel particles of claim 13 having component chemical compounds selected from the group containing alkaline earth metal hydroxides and oxide hydrates, alkaline neutralized salts of transition metals, silicates, ortho-silicates and certain poly-silicates, modified starches, cellulose derivatives, polysaccharides, and polyelectrolytes in non-ionic, polar organic carriers.