CLAIMS

1. A method for producing silicone hydrogel contact lenses, comprising the steps of:

(1) providing a reusable mold for making soft contact lenses, wherein the mold has a first mold half with a first molding surface defining the anterior surface of a contact lens and a second mold half with a second molding surface defining the posterior surface of the contact lens, wherein said first and second mold halves are configured to receive each other such that a cavity is formed between said first and second molding surfaces;
(2) introduce a fluid polymerizable composition into the cavity, wherein the fluid polymerizable composition comprises at least one silicone-containing lens-forming material selected from the group consisting of a siloxanecontaining vinylic monomer, a polysiloxane-containing vinylic monomer, a polysiloxane-containing macromer, a polysiloxane-containing crosslinker, an actinically-crosslinkable silicone-containing prepolymer, and a mixture thereof;
(3) irradiating, under a spatial limitation of actinic radiation, the fluid composition in the mold for a time period of 200 seconds or less, so as to form a silicone hydrogel contact lens, wherein the formed silicone hydrogel contact lens comprises an anterior surface defined by the first molding surface, an opposite posterior surface defined by the second molding surface, and a lens edge defined by the spatial limitation of actinic radiation;
(4) opening the mold and removing the formed silicone hydrogel contact lens from the mold;
(5) removing the silicone-containing lens forming material and other components of the fluid composition left behind on the first and second molding surfaces of the mold by washing the first and second molding surfaces of the reusable mold with a water-based solution containing from 0.01% to 10% by weight of a solvo-surfactant, wherein the solvo-surfactant is an alkyl (propylene glycol)n ether wherein alkyl is a linear alkyl group having 2 to 5 carbon atoms and n is the integer 1, 2 or 3; and
(6) repeating the steps (2) to (5).

2. The method of claim 1, wherein the solvo-surfactant is an alkyl (propylene glycol)$_n$ ether wherein alkyl is a linear alkyl group having 3 or 4 carbon atoms and n is the integer 1 or 2.

3. The method of claim 1 or 2, wherein the solvo-surfactant is an alkyl (propylene glycol)$_n$ ether wherein alkyl is linear butyl and n is the integer 1 having the chemical name propyleneglycol-n-butylether.

4. The method of claim 1 or 2, wherein the solvo-surfactant is an alkyl (propylene glycol)$_n$ ether wherein alkyl is linear propyl and n is the integer 1 having the chemical name propyleneglycol-n-propylether.

5. The method of claim 1 or 2, wherein the solvo-surfactant is an alkyl (propylene glycol)$_n$ ether wherein alkyl is linear butyl and n is the integer 2 having the chemical name di-propyleneglycol-n-butylether.

6. The method of any one of claims 1 to 5, wherein the fluid polymerizable composition comprises a siloxane-containing vinylic monomer and a polysiloxane-containing vinylic monomer or macromer or crosslinker.

7. The method of any one of claims 1 to 6, wherein the siloxane-containing vinylic monomer is N-[tris(trimethylsiloxy)silylpropyl] (meth)acrylamide, N-[tris(dimethyl-propylsiloxy)silylpropyl] (meth)acrylamide, N-[tris(dimethylphenylsiloxy) silylpropyl] acrylamide, N-[tris(dimethylphenylsiloxy)silylpropyl] (meth)acrylamide, N-[tris-(dimethylethylsiloxy) silylpropyl] (meth)acrylamide, N-(2-hydroxy-3-(3-(bis(trimethyl-silyloxy)methylsilyl)propyloxy)propyl)-2- methyl acrylamide; N-(2-hydroxy-3-(3-(bis(trimethylsilyloxy)methylsilyl)propyloxy)propyl) acrylamide; N,N-bis[2-hydroxy-3-(3-(bis(trimethylsilyloxy)methylsilyl)propyloxy)propyl]-2-methyl acrylamide; N,N-bis[2-hydroxy-3-(3-(bis(trimethylsilyloxy) methylsilyl)propyloxy)propyl] acrylamide; N-(2-hydroxy-3-(3-

(tris(trimethylsilyloxy)silyl)propyloxy)propyl)-2-methyl acrylamide; N-(2-hydroxy-3-(3-(tris(trimethylsilyloxy)silyl)propyloxy)propyl)acrylamide; N,N-bis[2-hydroxy-3-(3-(tris(trimethylsilyloxy)silyl)propyloxy)propyl]-2-methyl acrylamide; N,N-bis[2-hydroxy-3-(3-(tris(trimethylsilyloxy) silyl)propyloxy)propyl]acrylamide; N-[2-hydroxy-3-(3-(t-butyldimethylsilyl)propyloxy)propyl]-2-methyl acrylamide; N-[2-hydroxy-3-(3-(t-butyldimethylsilyl)propyloxy)propyl]acrylamide; N,N-bis[2-hydroxy-3-(3-(t-butyldimethylsilyl) propyloxy)propyl]-2-methyl acrylamide; N,N-bis[2-hydroxy-3-(3-(t-butyldimethylsilyl)propyloxy)propyl]acrylamide; 3-methacryloxy propylpentamethyldisiloxane, tris(trimethylsilyloxy)silylpropyl methacrylate (TRIS), (3-methacryloxy-2-hydroxypropyloxy)propylbis(trimethylsiloxy)methylsilane), (3-methacryloxy-2-hydroxypropyloxy)propyltris(trimethylsiloxy)silane, 3-methacryloxy-2-(2-hydroxyethoxy)-propyloxy)propylbis(trimethylsiloxy)methylsilane, N-2-methacryloxyethyl-O-(methyl-bis-trimethylsiloxy-3-propyl)silyl carbamate, 3-(trimethylsilyl)-propylvinyl carbonate, 3-(vinyloxycarbonylthio)propyl-tris(trimethyl-siloxy)silane, 3-[tris(trimethylsiloxy)silyl]propylvinyl carbamate, 3-[tris(trimethyl-siloxy)silyl] propyl allyl carbamate, 3-[tris(trimethylsiloxy)silyl]propyl vinyl carbonate, t-butyldimethylsiloxyethyl vinyl carbonate; trimethylsilylethyl vinyl carbonate, trimethylsilylmethyl vinyl carbonate), or combinations thereof.

8. The method of any one of claims 1 to 7, wherein the siloxane-containing vinylic monomer is N-[tris(trimethylsiloxy)silylpropyl] (meth)acrylamide, tris(trimethyl-silyloxy)silylpropyl methacrylate, 3-methacryloxy-2-hydroxypropyloxy)propyl-bis(trimethylsiloxy)methylsilane, or combinations thereof.

9. The method of any one of claims 1 to 8, wherein the fluid polymerizable composition comprises an actinically-crosslinkable silicone-containing prepolymer.

10. The method of any one of claims 1 to 9, wherein at least one of the first and second molding surfaces is permeable to a crosslinking radiation.

11. The method of claim 10, wherein the reusable mold comprises a mask which is fixed, constructed or arranged in, at or on the mold half having the radiation-permeable molding surface.

12. The method of any one of claims 1 to 11, wherein the fluid polymerizable composition comprises a hydrophilic vinylic monomer selected from the group consisting of N,N-dimethylacrylamide (DMA), N,N-dimethylmethacrylamide (DMMA), 2-acrylamidoglycolic acid, 3-acryloylamino-1-propanol, N-hydroxyethyl acrylamide, *N*-[tris(hydroxymethyl)methyl]-acrylamide, N-methyl-3-methylene-2-pyrrolidone, 1-ethyl-3-methylene-2-pyrrolidone, 1-methyl-5-methylene-2-pyrrolidone, 1-ethyl-5-methylene-2-pyrrolidone, 5-methyl-3-methylene-2-pyrrolidone, 5-ethyl-3-methylene-2-pyrrolidone, 1-n-propyl-3-methylene-2-pyrrolidone, 1-n-propyl-5-methylene-2-pyrrolidone, 1-isopropyl-3-methylene-2-pyrrolidone, 1-isopropyl-5-methylene-2-pyrrolidone, 1-n-butyl-3-methylene-2-pyrrolidone, 1-tert-butyl-3-methylene-2-pyrrolidone, 2-hydroxyethylmethacrylate (HEMA), 2-hydroxyethyl acrylate (HEA), hydroxypropyl acrylate, hydroxypropyl methacrylate (HPMA), trimethylammonium 2-hydroxy propylmethacrylate hydrochloride, aminopropyl methacrylate hydrochloride, dimethylaminoethyl methacrylate (DMAEMA), glycerol methacrylate (GMA), N-vinyl-2-pyrrolidone (NVP), allyl alcohol, vinylpyridine, a C_1-C_4-alkoxy polyethylene glycol (meth)acrylate having a weight average molecular weight of up to 1500, methacrylic acid, N-vinyl formamide, N-vinyl acetamide, N-vinyl isopropylamide, N-vinyl-N-methyl acetamide, N-vinyl caprolactam, and mixtures thereof.

13. The method of any one of claims 1 to 12, wherein the fluid polymerizable composition comprises one or more hydrophobic comfort agents selected from the group consisting of phospholipid, monoglyceride, diglyceride, triglyceride, glycolipid, glyceroglycolipid, sphingolipid, sphingo-glycolipid, fatty alcohol, hydrocarbon having a C_{12}-C_{28} chain in length, wax ester, fatty acid, mineral oil, silicone oil, and combinations thereof.

14. The method of any one of claims 1 to 13, wherein the fluid polymerizable composition comprises polyglycolic acid and/or a non-crosllinkable hydrophilic polymer having a weight-average molecular weight M_w of from 5,000 to 1,500,000, more preferably from 50,000 to 1,200,000, even more preferably from 100,000 to 1,000,000, Daltons.

15. The method of any one of claims 1 to 14, wherein the fluid polymerizable composition comprises a bioactive agent selected from the group consisting of rebamipide, ketotifen, olaptidine, cromoglycolate, cyclosporine, nedocromil, levocabastine, lodoxamide, ketotifen, 2-pyrrolidone-5-carboxylic acid glycolic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acids, linoleic acid, gamma linoleic acid, vitamins and the pharmaceutically acceptable salt thereof and combinations thereof.