Claims

1. A mold (1) for making a contact lens, comprising a first mold half (11) having a first mold surface (13) in contact with a silicone containing lens forming composition and a second mold half (12) having a second mold surface (14) in contact with the lens forming composition, wherein the first mold half (11) and the second mold half (12) are configured to receive each other such that a cavity (15) is formed between the first mold surface and the second mold surface, wherein the cavity (15) defines the shape of a contact lens to be molded, wherein the lens forming composition is polymerizable and/or crosslinkable by actinic radiation, characterized in that at least one of the mold halves (11, 12) is made from chalcogenide glasses, Zinc Selenide or Zinc Sulfide.

2. The mold for making a contact lens according to claim 1, wherein the mold hatf is made from Zinc Selenide.

3. The mold for making a contact lens according to claim 1, wherein the mold half is made from Zinc Sulfide.

4. The mold for making a contact lens according to anyone of preceding claims, wherein the mold half has a UV transmission cut-off wavelength no less than 350 nm.

5. The mold for making a contact lens according to anyone of preceding claims, wherein the mold half is single point diamond turned to produce optical quality surfaces.

6. A method for producing a contact lens, comprising: the steps of:

   (1) providing a contact lens mold, (1) wherein the mold comprises a first mold half (11) having a first mold surface (13) and a second mold half (12) having a second mold surface (14) wherein the first mold half and the second mold half are configured to receive each other such that a cavity (15) is formed between the first mold surface (13) and the second mold surface, (14) wherein the cavity (15) defines the shape of a contact lens to be molded, wherein at least one of the mold halves is made from chalcogenide glasses, Zinc Selenide or Zinc Sulfide, (2) introducing a lens-forming composition into the cavity (15) formed by the first and second molding surfaces (13, 14) wherein the lens-forming material is crosslinkable and/or polymerizable by actinic radiation; (3) crosslinking/polymerizing the lens forming material in the mold to form a lens having a polymer matrix; (4) opening the mold (1) and removing the formed contact lens from the mold, wherein the formed contact lens has a clean lens edge without flash.

7. The method for producing a contact lens according to claim 6, wherein in step (1) the mold halve is made from Zinc Selenide.

8. The method for producing a contact lens according to claim 6, wherein the mold half is made from Zinc Sulfide.

9. The method for producing a contact lens according to anyone of claims 6 to 8, wherein the mold half has a UV transmission cut-off wavelength no less than 350 nm.

10. The method for producing a contact lens according to anyone of claims 6 to 9, wherein the mold half is single point diamond turned to produce optical quality surfaces.

11. The method for producing a contact lens according to anyone of claims 6 to 10, wherein the lens-forming composition comprises at least one components selected from the group consisting of a silicone-containing vinylic monomer, a silicone-containing vinylic macromer, a silicone-containing prepolymer, a hydrophilic vinylic monomer, a hydrophobic vinylic monomer, a crosslinking agent, a free-radical initiator (photoinitiator or thermal initiator), a hydrophilic vinylic macromer/prepolymer, and combinations thereof.

12. The method for producing a contact lens according to anyone of claims 6 to 11, wherein the lens-forming composition further comprises at least one UV-absorbing vinylic monomer that absorbs ultraviolet light.

13. The method for producing a contact lens according to anyone of claims 6 to 12, wherein the lens-forming composition further comprises at least one germanium-based Norrish Type I photoinitiator.

14. The method for producing a contact lens according to anyone of claims 6 to 13, wherein the lens-forming composition is crosslinked and/or polymerized by UV LED in a region from 380 nm to 550 nm.

15. The method for producing a contact lens according to anyone of claims 6 to 14, wherein the lens-forming composition is crosslinked and/or polymerized by UV LED with a total intensity from about 10 to about 100 mW/cm2 in the region from 380 nm to 550 nm.