4. Process according to Claim 3, characterized in that filling with the reactive mixture and closure of the mould are followed within 5 to 8 seconds by heating to the temperature between 100 and 140°C.

5. Process according to Claim 3, characterized in that, before the liquid injection, the cavity is replaced by a different cavity, preferably by means of a sliding table.

6. Process according to Claim 3, characterized in that the intermediate space between surface of the moulding to be coated and the inner surface of the injection mould has a thickness between 5 µm and 80 µm.

7. Process according to ~~at least~~ any one of Claims 1 to 6, characterized in that the reactive mixture is a formulation comprising at least 40% by weight of a di(meth)acrylate, at least 10% by weight of a tri-, tetra- or penta(meth)acrylate, and 0.01 to 3.0% by weight of a thermal initiator.

8. Process according to Claim 7, characterized in that the reactive mixture does not comprise any lubricants and/or mould release agents.

9. Process according to ~~at least~~ any one of Claims 1 to 8, characterized in that the moulding material comprises at least 50% by weight of polymethyl methacrylate, polymethacrylmethylimide and/or polymethyl methacrylate copolymers.

10. Process according to ~~at least~~ any one of the preceding claims, characterized in that the reactive mixture has a dynamic viscosity in the range from 1 to 200 mPa*s at 25°C.

11. Process according to ~~at least~~ any one of Claims 1 to 10, characterized in that the maximum of the heating power by which the surface of the injection mould facing the moulding is heated is within a period which begins at the time of the minimum temperature of the uncoated moulding and ends less than 1 second after the injection of the reactive mixture.

12. Process according to ~~at least~~ any one of Claims 1 to 10, characterized in that the maximum of the heating power by which the surface of the injection mould facing the moulding is heated is attained before or during the injection of the reactive mixture.

13. System for performing a process according to ~~at least~~ any one of Claims 1 to 12, said system having an alterable injection mould, characterized in that the temperature of at least one part of the injection mould can be altered by more than 10°C within 1 minute.

14. Coated moulding, characterized in that it is producible by the process according to ~~at least~~ any one of Claims 1 to 13, in that the coated moulding after the coating has shiny surface regions with scratch-resistant coating and/or structured, non-shiny surface regions with scratch-resistant coating, and in that, at the time of injection of the reactive mixture, the moulding has a temperature of at least 70°C, and the reactive mixture is hardened at a temperature of at least 100°C.

15. Coated moulding according to Claim 14, characterized in that the coated moulding after the coating has shiny surface regions with scratch-

resistant coating and structured, non-shiny surface regions with scratch-resistant coating, each having a thickness of the coatings between 5 µm and 80 µm.

16. Coated moulding according to ~~at least~~ any one of Claims 14 and 15, characterized in that the surface structuring is a micro- or nanostructuring, and in that the flank angle of the structural units is greater than 95° and less than 160°C.