CLAIMS

1. Two-layer road marking or ground coating having a first lower layer which is a cured 2-pack (meth)acrylate-based reactive resin formulation containing, prior to curing, in one or both packs, at least 0.3% by weight of crosslinker, at least 4% by weight of (meth)acrylate monomers, at least 2% by weight of prepolymers and optional further additives and a second upper layer, wherein the second upper layer is a cured reactive resin seal composed of up to 50% by weight of pigments, fillers and/or additives and of at least 50% by weight of a cured (meth)acrylate resin consisting in turn to an extent of at least 50% by weight of repeat units based on (meth)acrylates and having a glass transition temperature T_g of at least 60°C,

   wherein the reactive resin seal, prior to curing to give the second upper layer, contains 10% to 35% by weight of a poly(meth)acrylate and/or a polyester, 40% to 80% by weight of monomers, which are (meth)acrylates and/or partly monomers copolymerizable with (meth)acrylates, 1% to 10% by weight of crosslinker, 0% to 5% by weight of a tertiary aromatic amine, 0% to 25% by weight of pigments and/or fillers, 1% to 10% by weight of additives, which are plasticizers, paraffins, UV absorbers, stabilizers and/or blueing agents, and 0.1% to 5% by weight of one or more initiators, which are combined only shortly before application with the tertiary amine in the mixture, where the poly(meth)acrylates and/or polyesters have a glass transition temperature T_g of at least 70°C and the monomer component consists to an extent of 50% by weight of those monomers which, in the fully polymerized state, have a glass transition temperature of at least 60°C, and

   wherein the two packs of the reactive resin for production of the first lower layer together have the following ingredients:
   0.5% by weight to 30% by weight of crosslinker,
   10% by weight to 96.1% by weight of (meth)acrylates and optionally components copolymerizable with (meth)acrylates,
   0% by weight to 20% by weight of urethane (meth)acrylates,
   3% by weight to 45% by weight of prepolymers,
   0.1% by weight to 5% by weight of at least one tertiary amine,
   0% by weight to 25% by weight of core-shell particles,
   0.5% by weight to 10% by weight of at least one initiator, where the initiator(s) and the tertiary amine, prior to mixing, are present in separate packs of the 2-pack system, and optionally further auxiliaries.

2. Road marking or ground coating according to Claim 1, wherein the second upper layer contains at least 80% by weight of the cured (meth)acrylate resin and not more than 20% by weight of pigments, fillers and/or additives.

3. Road marking or ground coating according to Claim 1 or 2, wherein the cured (meth)acrylate resin in the second upper layer has a glass transition temperature T_g of at least 70°C.

4. Road marking or ground coating according to Claim 1, wherein the reactive resin seal, prior to curing, contains 15% to 25% by weight of a poly(meth)acrylate, 60% to 75% by weight of (meth)acrylates having C_1-C_4-alkyl radicals, 2% to 8% by weight of di- and/or tri(meth)acrylates, 0.4% to 4% by weight of a tertiary aromatic amine, 0% to 10% by weight of pigments and/or fillers, 2% to 8% by weight of additives and 0.2% to 4% by weight of dilauroyl peroxide and/or dibenzoyl peroxide, where the poly(meth)acrylates and the fully polymerized (meth)acrylates each have a glass transition temperature T_g of at least 70°C.

5. Road marking or ground coating according to any of Claims 1 to 4, wherein the two packs of the reactive resin for production of the first lower layer together have the following ingredients:
0.5% by weight to 30% by weight of crosslinker,
10% by weight to 96.1% by weight of (meth)acrylates and optionally components copolymerizable with (meth)acrylates,
4% by weight to 20% by weight of urethane (meth)acrylates,
3% by weight to 45% by weight of prepolymers,
0.1% by weight to 5% by weight of at least one tertiary amine,
1% by weight to 25% by weight of core-shell particles,
0.5% by weight to 10% by weight of at least one initiator, where the initiator(s) and the tertiary amine, prior to mixing, are present in separate packs of the 2-pack system, and optionally further auxiliaries.

6. Road marking or ground coating according to Claim 1, wherein the two packs of the reactive resin for production of the first lower layer together have the following ingredients:
2% by weight to 20% by weight of di-, tri- or tetra(meth)acrylates,

30% by weight to 80% by weight of (meth)acrylates and optionally components copolymerizable with (meth)acrylates,
0% by weight to 20% by weight of urethane (meth)acrylates,
15% by weight to 40% by weight of poly(meth)acrylates and/or polyesters,
0.4% by weight to 2.0% by weight of at least one tertiary amine,
0% by weight to 20% by weight of core-shell particles,
1% by weight to 7% by weight of initiator, where the initiator and the tertiary amine are present in separate packs of the 2-pack system, and optionally further auxiliaries.

7. Road marking or ground coating according to Claim 1, wherein the reactive resin for production of the first lower layer is halogen-free, and in that the reactive resin has the following ingredients:
3% by weight to 15% by weight of dimethacrylates,
30% by weight to 40% by weight of (meth)acrylates and optionally components copolymerizable with (meth)acrylates,
0% by weight to 20% by weight of urethane (meth)acrylates,
20% by weight to 30% by weight of poly(meth)acrylates,
0.2% to 0.8% by weight of tertiary amines,
0% by weight to 15% by weight of core-shell particles comprising polymethacrylates,
1.5% by weight to 5% by weight of dilauroyl peroxide and/or dibenzoyl peroxide as initiator and optionally further auxiliaries.

8. Road marking or ground coating according to at least one of Claims 1 to 7, wherein the first, lower layer includes between 15% and 55% by weight of cured reactive resin, 0.15% by weight to 25% by weight of an inorganic pigment, preferably titanium dioxide, 0% by weight to 5% by weight of stabilizers and/or additives and 20% by weight to 80% by weight of mineral and/or polymeric fillers.

9. Road marking or ground coating according to at least one of Claims 1 to 8, wherein the second upper layer has a thickness of not more than 500 µm.

10. Road marking or ground coating according to Claim 9, wherein the second upper layer has a thickness of not more than 200 µm.

11. Method for laying a particularly heat-resistant and soil-repellent road marking according to claim 1, wherein this method includes the following method steps:
a) mixing the components of a reactive resin for production of the first lower layer,

wherein the two packs of the reactive resin together have the following ingredients:

0.5% by weight to 30% by weight of crosslinker,

10% by weight to 96.1% by weight of (meth)acrylates and optionally components copolymerizable with (meth)acrylates,

4% by weight to 20% by weight of urethane (meth)acrylates,

3% by weight to 45% by weight of prepolymers,

0.1% by weight to 5% by weight of at least one tertiary amine,

1% by weight to 25% by weight of core-shell particles,

0.5% by weight to 10% by weight of at least one initiator, where the initiator(s) and the tertiary amine, prior to mixing, are present in separate packs of the 2-pack system, and optionally further auxiliaries,

b) applying the reactive resin to the road surface within the pot life of the reactive resin,

c) mixing the components for production of the second upper layer, wherein

the reactive resin seal, prior to curing to give the second upper layer, contains 10% to 35% by weight of a poly(meth)acrylate and/or a polyester, 40% to 80% by weight of monomers, which are (meth)acrylates and/or partly monomers copolymerizable with (meth)acrylates, 1% to 10% by weight of crosslinker, 0% to 5% by weight of a tertiary aromatic amine, 0% to 25% by weight of pigments and/or fillers, 1% to 10% by weight of additives, which are plasticizers, paraffins, UV absorbers, stabilizers and/or blueing agents, and 0.1% to 5% by weight of one or more initiators, which are combined only shortly before application with the tertiary amine in the mixture, where the poly(meth)acrylates and/or polyesters have a glass transition temperature T_g of at least 70°C and the monomer component consists to an extent of 50% by weight of those monomers which, in the fully polymerized state, have a glass transition temperature of at least 60°C ,

d) applying the reactive resin from method step c) to the first lower layer within the pot life of the reactive resin and

e) optionally sprinkling with glass beads,

wherein the method step c) can be conducted before, in parallel with or after method steps a) or b), and method step e) before, in parallel with or after method step d).

12. Method according to Claim 11, wherein the laying is effected by machine or by means of a vehicle or device, with initial application of the first, lower layer from one or more outlet devices to the road surface or other outer surface according to method step b), followed within the pot life of the first lower layer by spray application of the second upper layer without initiator by means of one or more outlet devices according to method step d) to the first, as yet uncured lower layer, and with optional laying of glass beads from one or

more optional outlet devices onto one of the two layers according to method step e) within the pot life of the layer in question, wherein the three outlet devices are not more than 2 m apart in movement direction and are operated simultaneously.