Claims

1. Security label comprising at least one extruded polymethacrylate film, wherein the polymethacrylate film has a thickness of between 15 and 120 µm and an elongation at break of between 2.0% and 15% measured by the method ASTM D1004; and
consists of 55 to 100 wt% of a polymethacrylate which consists of 80 to 100 wt% of MMA and 0 to 20 wt% of styrene and/or other (meth)acrylates having an alkyl radical having 1 to 4 carbon atoms;
the weight-average molecular weight M_w of the polymethacrylate is from 80 000 to 300 000 g/mol; and
the polymethacrylate film comprises at most 10 wt% of or no impact modifiers.

2. Security label comprising at least one polymethacrylate film according to Claim 1, wherein the polymethacrylate film consists of 90 to 100 wt% of a polymethacrylate which consists of 90 to 100 wt% of MMA and 0 to 10 wt% of acrylates having an alkyl radical having 1 to 4 carbon atoms, and the polymethacrylate film has a thickness of between 20 and 75 µm.

3. Security label comprising at least one polymethacrylate film according to at least one of Claim 1 or 2, wherein the polymethacrylate film is coloured white and for that purpose comprises between 5 and 40 wt% of titanium dioxide.

4. Security label comprising at least one polymethacrylate film according to at least one of Claims 1 to 3, wherein the polymethacrylate films are produced by means of a process which is an extrusion process and which line used consists at least of the following components:
an extruder,
a melt pump,
an optional melt filtration facility,
an optional static mixing element,
a flat film die,
a polishing stack or chill roll,
and a winder,
the flat film die possessing a die lip having actuating elements for adjusting the die lip width, and the actuating elements having a distance of 11 to 15 mm from one another, the die body having an external geometry adapted to the shape of the polishing rolls, and the distance from the melt exit edge to the polishing nip being 80 mm or less.

5. Security label comprising at least one polymethacrylate film according to Claim 4, wherein the flat film die is oriented relative to the polishing stack by means of laser and the parallel

deviation of the die relative to the polishing rolls, measured at the two ends of one outer side of the die, exhibits a maximum deviation of 3 mm.

6. Security label comprising at least one polymethacrylate film according to at least one of Claims 1 to 5, wherein the difference between the thinnest and the thickest point of the polymethacrylate film is at most 5 µm.

7. Security label comprising at least one polymethacrylate film according to at least one of Claims 4 to 6, wherein die and roll have chrome surfaces, and these chrome surfaces have a roughness Ra of less than 0.08 µm.

8. Application-capable security film, wherein the security film has a thickness of between 15 and 120 µm and an elongation at break of between 2.0% and 15%, and the security film before application has at least the following layers in the order stated:
   a) a polymethacrylate film as defined in any of Claims 1-7 which consists of 55 to 100 wt% of a polymethacrylate which consists of 80 to 100 wt% of MMA and 0 to 20 wt% of styrene or other (meth)acrylates having an alkyl radical having 1 to 4 carbon atoms, wherein the film additionally comprises at most 10 wt% of impact modifiers, and has printing on at least one side,
   b) a pressure-sensitive adhesive,
   c) a release coating and
   d) a support layer.

9. Application-capable security film according to Claim 8, wherein layer a) has a thickness without printing of between 20 and 75 µm, the printing has a thickness of between 1.5 and 3 µm, the layer b) has a thickness of between 20 and 30 µm, the layer c) has a thickness of between 0.5 and 1.2 µm and the layer d) has a thickness of between 20 and 70 µm.

10. Application-capable security film according to Claim 8 or 9, wherein the application-capable security film consists of 90 to 100 wt% of the polymethacrylate.

11. Application-capable security film according to Claim 8 or 9, wherein the application-capable security film is coloured white and for that purpose comprises 55 to 95 wt% of polymethacrylate and 5 to 40 wt% of titanium dioxide.

12. Application-capable security film according to at least one of Claims 8 to 11, wherein the application-capable security film contains no impact modifiers.

13. Use of the security films according to Claim 8 or 11 for producing chip cards, documents, security labels, other labels or price tags.