Claims

1. Security label comprising at least one extruded polymethacrylate film, characterized in that 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; and
the weight-average molecular weight M_w of the polymethacrylate is from 80 000 to 300 000 g/mol. .

2. Security label comprising at least one polymethacrylate film according to Claim 1, characterized in that the polymethacrylate film comprises at most 10 wt% of or no impact modifiers.

3. Security label comprising at least one polymethacrylate film according to Claim 1 or 2, characterized in that 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 in that the polymethacrylate film has a thickness of between 20 and 75 µm.

4. Security label comprising at least one polymethacrylate film according to at least one of Claims 1 to 3, characterized in that the polymethacrylate film is coloured white and for that purpose comprises between 5 and 40 wt% of titanium dioxide.

5. Security label comprising at least one polymethacrylate film according to at least one of Claims 1 to 4, characterized in that the polymethacrylate films are produced by means of a process which is characterized in that it is an extrusion process and in that the 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.

6. Security label comprising at least one polymethacrylate film according to Claim 5, characterized in that the flat film die is oriented relative to the polishing stack by means of laser and in that 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.

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

8. Security label comprising at least one polymethacrylate film according to at least one of Claims 5 to 7, characterized in that die and roll have chrome surfaces, and in that these chrome surfaces have a roughness Ra of less than 0.08 µm.

9. Application-capable security film, characterized in that the security film has a thickness of between 15 and 120 µm and an elongation at break of between 2.0% and 15%, and in that 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 1-8 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, the film being additionally characterized in that it comprises at most 10 wt% of impact modifiers, and in that it has printing on at least one side,
   b) a pressure-sensitive adhesive,
   c) a release coating and
   d) a support layer.

10. Application-capable security film according to Claim 9, characterized in that 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.

11. Application-capable security film according to Claim 9 or 10, characterized in that the application-capable security film is transparent and consists of 90 to 100 wt% of the polymethacrylate.

12. Application-capable security film according to Claim 9 or 10, characterized in that 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.

13. Application-capable security film according to at least one of Claims 9 to 12, characterized in that the application-capable security film contains no impact modifiers.

14. Use of the security films according to Claim 9 or 12 for producing chip cards, documents, security labels, other labels or price tags.