

19. A protective film (4) configured to be used in a method of processing a wafer (W), the wafer (W) having on one side (1) a device area (2) with a plurality of devices (7), wherein:

the protective film (4) is configured for being applied to the one side (1) of the wafer (W) so that a front surface (4a) of the protective film (4) is in direct contact with the one side (1) of the wafer (W); and

the protective film (4) is configured so that an attachment force between protective film (4) and wafer (W), attaching the protective film (4) to the one side (1) of the wafer (W), is generated through heating the protective film (4).

20. The protective film (4) according to claim 19, wherein the protective film (4) is configured to be softened by heating the protective film (4).

21. The protective film (4) according to claim 20, wherein the protective film (4) is configured to reharden upon cooling down.

22. The protective film (4) according to any one of claims 19 to 21, wherein the protective film (4) is configured so that, by heating the protective film (4), a form fit and/or a material bond is formed between the protective film (4) and the wafer (W).

23. The protective film (4) according to any one of claims 19 to 22, wherein the protective film (4) is heat resistant up to a temperature of 180 °C or more.

24. The protective film (4) according to any one of claims 19 to 23, wherein the protective film (4) is configured so that the attachment force between protective film (4) and wafer (W), attaching the protective film (4) to the one side (1) of

the wafer (W), is generated through heating the protective film (4) to a temperature in the range of 60 °C to 150 °C.

25. The protective film (4) according to any one of claims 19 to 24, wherein the protective film (4) is configured so that the attachment force between protective film (4) and wafer (W), attaching the protective film (4) to the one side (1) of the wafer (W), is generated through heating the protective film (4) over a duration in the range of 1 min to 10 min.

26. The protective film (4) according to any one of claims 19 to 25, wherein the protective film (4) is configured to be pliable, elastic, flexible, stretchable, soft and/or compressible when in its heated state.

27. The protective film (4) according to any one of claims 19 to 26, wherein the protective film (4) has a thickness in the range of 5 to 200 μm .

28. The protective film (4) according to any one of claims 19 to 27, wherein the protective film (4) is made of a polymer, in particular, a polyolefin.