Claims

1. Mould for at least partially encapsulating a carrier with electronic components, comprising:

- at least two mould parts, at least one of which being provided with at least one mould cavity recessed into a contact side for enclosing electronic components placed on a carrier, the contact surface at least partially enclosing the mould cavity for medium-tight connection onto the carrier; and
- a feed channel for moulding material recessed into the contact surface of the mould part provided with the mould cavity;

wherein in the mould part with the feed channel is provided with a displaceable barrier element connecting to the feed channel for regulating the size of an moulding material passage in the feed channel, which barrier element is displaceable in a direction substantially perpendicular to the contact surface.

2. Mould as claimed in claim 1, **characterized in that** the mould part with the feed channel and the displaceable barrier element is provided with a drive for controlling the relative position of the displaceable barrier element to the feed channel for moulding material.

3. Mould as claimed in claim 1 or 2, **characterized in that** the displaceable barrier element is resilient connected to the mould part.

4. Mould as claimed in any of the foregoing claims, **characterized in that** the mould part is provided with a foil handling mechanism.

5. Mould as claimed in any of the foregoing claims, **characterized in that** the mould part is provided with a plurality of feed channels for moulding material, each connecting to a displaceable barrier element.

6. Mould as claimed in any of the foregoing claims, **characterized in that** the mould part with the feed channel for moulding material is also provided with an outlet channel recessed into the contact surface and connecting to the mould cavity for discharge of gas from the mould cavity

7. Mould as claimed in any of the foregoing claims, **characterized in that** the mould part with a moulding cavity is provided with at least one sensor for detecting the pressures prevailing in the mould cavity and/or the feed channel for moulding material.

8. Mould as claimed in any of the foregoing claims, **characterized in that** at a first mould part is provided with an additional clamping mould part, which additional clamping mould part is movable in respect to the first mould part to clamp at least one edge of a board to the first mould part, which clamping mould part in a closed position of the mould connects to the feed for moulding material.

9. Moulding apparatus for at least partially encapsulating a carrier with electronic components, comprising:

- a press including at least two mould carriers and a drive for relative movement of mould carriers;
- a mould as claimed in any of the foregoing claims; and
- a feed for liquid moulding material connecting onto the feed channel for moulding material.

10. Moulding apparatus as claimed in claim 9, **characterized in that** the feed for liquid moulding material comprises a plunger which is movable in a cylinder casing.

11. Method for at least partially encapsulating a carrier with electronic components, comprising the processing steps:

A) placing a carrier with electronic components on a first mould part;

B) moving the mould parts towards each other such that the carrier with electronic components is clamped between at least two mould parts and the electronic components to be encapsulated are enclosed by a mould cavity recessed into a contact side of a mould part;

C) feeding a liquid moulding material via a feed for liquid encapsulation material recessed into a contact side of a mould part into the mould cavity; and

D) moving apart the mould parts to remove the carrier with at least partially cured moulded material from the mould parts;

wherein during processing step C) a displaceable barrier element is moved in the feed for liquid encapsulation material to control the liquid moulding material flow, and wherein during processing step D) the displaceable barrier element is moved to push the at least partially cured moulding material out of the feed.

12. Method as claimed in claim 11, **characterized in that** the displaceable barrier element is moved in a direction substantially perpendicular to a contact surface of the mould part wherein the feed for liquid encapsulation material is recessed.

13. Method as claimed in claim 11 or 12, **characterized in that** after a carrier with electronic components is placed on a first mould part according to processing step A) and before the mould parts are moved towards each other such that the carrier with electronic components is clamped between two mould parts according to processing step B) at least one edge of the board the board is clamped to the first mould part with an additional mould part which additional mould part also guides the liquid moulding material to the mould cavity during processing step C).

14. Method as claimed in any of the claims 11 - 13, **characterized in that** before feeding a liquid moulding material according processing step C) via a feed for liquid encapsulation material recessed into a contact side of a mould part into the mould cavity at least a part of the mould part is covered by a foil layer.

15. Method as claimed in any of the claims 11 - 14, **characterized in that** the displaceable barrier element after finishing processing step C) is moved further in the feed for liquid encapsulation material to separate the mould cavity filled with liquid moulding material from the runners part faced away from the mould cavity and that the force that a closing force of the mould parts is varied to change the pressure on the moulding material in the moulding cavity.