Claims

1. Method for encapsulating electronic components mounted on a carrier, comprising the processing steps of:

A) placing an electronic component for encapsulating into a mould cavity connecting to the carrier,

B) filling the mould cavity with liquid encapsulating material, and

C) at least partially curing the encapsulating material in the mould cavity,

wherein a reduction material is introduced into the mould cavity before filling the mould cavity with encapsulating material during processing step B), which reduction material undergoes a phase change during processing step B) whereby the volume of the reduction material decreases.

2. Method as claimed in claim 1, **characterized in that** a film material is arranged between the carrier with electronic components and the mould cavity connecting to the carrier, the liquid encapsulating material is fed between the carrier and the film material and the reduction material is carried between the film and the mould cavity.

3. Method as claimed in claim 1 or 2, **characterized in that** the reduction material at least condenses from the gas phase during filling of the mould cavity with encapsulating material as according to processing step B).

4. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is carried actively into the mould cavity in gas phase.

5. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is carried actively into the mould cavity as mist.

6. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is in liquid phase when it is actively carried into the mould cavity.

7. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is in solid phase when it is actively carried into the mould cavity.

8. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is chosen from the group of: H_2O (water) and C_2H_4OH (ethanol).

9. Method as claimed in any of the foregoing claims, **characterized in that** an underpressure is applied in the mould cavity before or during filling of the mould cavity with encapsulating material as according to processing step B).

10. Method as claimed in any of the foregoing claims, **characterized in that** an underpressure is applied in the mould cavity before or during introduction of the reduction material into the mould cavity.

11. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is fed into the mould cavity through a suction opening for gases before the mould cavity is closed.

12. Device for encapsulating electronic components mounted on a carrier, comprising:

- mould parts which are displaceable relative to each other and which, in a closed position, define at least one mould cavity for enclosing an electronic component, and
- feed means for encapsulating material connecting to the mould cavity,

wherein the device is also provided with feed means for a reduction material connecting to the mould cavity.

13. Encapsulating device as claimed in claim 12, **characterized in that** the device is also provided with feed means for feeding a film material between the mould parts.

14. Encapsulating device as claimed in claim 13, **characterized in that** the feed means for a reduction material and the feed means for encapsulating material are located on opposite sides of the film fed by the feed means for film material.

15. Encapsulating device as claimed in claim 13 or 14, **characterized in that** the feed means for a reduction material are adapted to arrange the reduction material on a film material.

Claims

1. Method for encapsulating electronic components mounted on a carrier, comprising the processing steps of:

A) placing an electronic component for encapsulating into a mould cavity connecting to the carrier;

B) filling the mould cavity with liquid encapsulating material; and

C) at least partially curing the encapsulating material in the mould cavity, wherein:

- a reduction material is introduced into the mould cavity before filling the mould cavity with encapsulating material during processing step B), which reduction material undergoes a phase change during processing step B) whereby the volume of the reduction material decreases; and
- before introducing the reduction material into the mould cavity, a film material is arranged between the carrier with the electronic component and the mould cavity connecting to the carrier,

characterized in that the liquid encapsulating material is fed between the carrier and the film material and the reduction material is carried between the film material and the mould cavity.

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2. Method as claimed in claim 1, **characterized in that** the reduction material at least condenses from the gas phase during filling of the mould cavity with encapsulating material as according to processing step B).

3. Method as claimed in claim 1 or 2, **characterized in that** the reduction material is carried actively into the mould cavity in gas phase.

4. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is carried actively into the mould cavity as mist.

5. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is in liquid phase when it is actively carried into the mould cavity.

6. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is in solid phase when it is actively carried into the mould cavity.

7. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is chosen from the group of: H_2O (water) and C_2H_5OH (ethanol).

8. Method as claimed in any of the foregoing claims, **characterized in that** an underpressure is applied in the mould cavity before or during:

- filling of the mould cavity with encapsulating material as according to processing step B); and/or
- introduction of the reduction material into the mould cavity.

9. Method as claimed in any of the foregoing claims, **characterized in that** the reduction material is fed into the mould cavity through a suction opening for gases before the mould cavity is closed.

10. Device for encapsulating electronic components mounted on a carrier, comprising:

- mould parts which are displaceable relative to each other and which, in a closed position, define at least one mould cavity for enclosing an electronic component; and
- feed means for encapsulating material connecting to the mould cavity, wherein the device is also provided with:
- feed means for a reduction material connecting to the mould cavity; and
- feed means for feeding a film material between the mould parts,

characterized in that the feed means for a reduction material and the feed means for encapsulating material are located on opposite sides of the film material fed by the feed means for film material.

11. Encapsulating device as claimed in claim 10, **characterized in that** the feed means for a reduction material are adapted to arrange the reduction material on the film material fed by the feed means for film material.

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