Claims

1. Manufacturing process for producing hermetic single-use food containers, including:

- forming a 3D container body (30) having a peripheral upper rim (31), by stamping a 2D blank (10, 10') in a press, the 2D blank including a rim portion (11, 11') and a wall portion (12, 12'),
- applying a closing lid (34) over the 3D container body,
- sealing the closing lid (34) with the rim (31) of the container body,

comprising a creasing step before forming the 3D container body, where creases (13; 16-19) are formed in a peripheral zone of the 2D blank (10, 10'), here referred to as a pre-creased peripheral zone, by creasing, stamping or embossing the 2D blank with a creasing or embossing plate, which pre-creased peripheral zone covers at least a part of the rim portion (11, 11') of the 2D blank,

characterized in that the 2D blank is made from a sheet of paper/ polylactic acid (PLA) laminate.

2. Manufacturing process according to claim 1, characterized in that the creases (13; 16-19) follow centrifugal directions of the 2D blank.

3. Manufacturing process according to claim 2 wherein the 2D blank (10, 10') is a disc, characterized in that the creases (13; 16-19) are rectilinear and follow radii of the disc.

4. Manufacturing process according to one of claims 1 to 3, characterized in that the pre-creased peripheral zone covers the whole rim portion (10, 10') of the 2D blank.

5. Manufacturing process according to claim 1, characterized in that at least some of the creases (13; 16, 17) extend from an outer edge of the rim portion (10, 10') till an inner edge of the rim portion, through the entire width of the rim portion.

6. Manufacturing process according to one of claims 1 to 5, characterized in that the pre-creased peripheral zone also covers a part of the wall portion (12') of the 2D blank (10').

7. Manufacturing process according to claim 6, characterized in at least some of the creases formed in the rim portion continue in the wall portion (12') beyond an inner edge of the rim portion toward a center of the 2D blank (10').

8. Manufacturing process according to one of claims 6 or 7, characterized in that a first crease (16, 17) in the rim portion is extended in the wall portion with a second crease (18, 19) having another form than the first crease.

9. Manufacturing process according to one of claims 1 to 8 wherein the 2D blank has a diameter or a diagonal comprised between 10mm and 100mm, characterized in that the pre-creased peripheral zone has a width comprised between 5mm and 20mm.

10. Manufacturing process according to one of claims 1 to 9, characterized in that the creases (13) are formed only on a first side of the 2D blank (10).

11. Manufacturing process according to one of claims 1 to 9, characterized in that some of the creases (16, 19) are formed on a first side of the 2D

blank, while the other creases (17, 18) are formed in the opposite second side of the 2D blank (10').

12. Manufacturing process according to claim 11, characterized in that the creases are alternately formed on both sides of the 2D blank, a crease (16) formed on the first side of the 2D blank being followed by a crease (17) formed on the second side of the 2D blank.

13. Manufacturing process according to one of claims 1 to 12, characterized in that the creases (13, 16-19) have a depth comprised between 0.1mm and 1mm, and a width comprised between 0.2mm and 0.7mm, and in that they are spaced apart with a pitch comprised between 0.2 mm and 2 mm.

14. Manufacturing process according to one of claims 1 to 13, characterized in that the creasing or embossing plate is heated at a temperature comprised between 30°C and 150°C.

15. Manufacturing process according to one of claims 1 to 14, characterized in that the forming step of the 2D blank into a 3D container body comprises wetting and/or heating the rim portion with a wetted and/or heated forming cavity, punch or plate.