Claims

1. A thermally insulated container comprising:

a main body moulded from a single piece of expanded foam;

a lid; and

a plurality of rectangular cool packs, wherein: the main body has a base and four walls which four walls define a mouth of the main body of the container which mouth is arranged to be closed by the lid of the container, wherein:

the inner surfaces of the walls of the main body taper from the mouth of the main body to a base of main body, such that the internal dimensions of the main body are greater at the mouth of the main body than they are at the base of the main body;

the lid comprises a roof and four walls protruding downwardly from the roof, which walls define a mouth of the lid which mouth is arranged to engage with the mouth of the main body so that the lid may close the main body of the container;

when the container is closed the cool packs extend from towards the base inside the main body towards the roof of the lid; and

the inner surface of the walls of the lid are tapered such that positioning the lid on the main body with the cool packs arranged around the inner surfaces of the walls causes the cool packs to be aligned so that they extend vertically, perpendicular to an inner surface of the base of the main body.

2. A container as claimed in Claim 1, wherein the internal dimensions of the main body at the base of the main body are the same as the internal dimensions of the lid at the roof of the lid.

3. A container as claimed in Claim 1 or 2, wherein the lid is moulded form a single piece of expanded foam.

4. A container as claimed in any preceding claim, wherein the lid and main body are moulded from the same type of expanded foam.

5. A container as claimed in any preceding claim, wherein the expanded foam is expanded polystyrene.

6. A container as claimed in any preceding claim, comprising four wall cool packs, dimensioned to fit against respective internal walls of the container.

7. A container as claimed in Claim 6, wherein the edges of each wall cool pack are arranged to abut those of an adjacent wall cool pack when the lid is closed.

8. A container as claimed in Claim 6 or 7, wherein the side edges of each wall cool pack are chamfered at 45° relative to inner and outer faces of the cool packs such that the wall cool packs are locked together by the lid and main body to define a space within the wall cool packs for a product to be stored or transported within the container.

9. A container as claimed in any preceding claim, comprising four wall cool packs arranged to line the inner walls of the container, a base cool pack to sit in the base of the main body and a top cool pack to sit on top of the wall cool packs.

10. A container as claimed in Claim 9, wherein the base and top cool packs are substantially identical.

11. A container as claimed in Claim 9 or 10, wherein the four side wall cool packs are substantially identical.

12. A container as claimed in any preceding claim, wherein the cool packs are tray formed and flexible.

13. A container as claimed in any of Claims 1 to 11, wherein the cool packs are blow moulded and rigid.

14. A container as claimed in Claim 13, wherein the cool packs are formed from high density polyethylene.

15. A container as claimed in any preceding claim, wherein the inner surfaces of the walls of the main body and the inner surface of the walls of the lid directly contact the cool packs.

16. A container as claimed in any preceding claim, further comprising a layer of insulation panels located between the inner walls of the main body and the cool packs.

17. A container as claimed in Claim 16, wherein the inner surfaces of the walls of the lid are tapered such that positioning the lid on the main body with the insulation panels arranged around the inner surfaces of the walls causes the insulation panels to be aligned so that they extend vertically, perpendicular to an inner surface of the base of the main body and vertically align the wall cool packs located inside of the insulation panels, so they extend perpendicular to an inner surface of the base of the main body .

18. A container as claimed in Claim 16 or 17, wherein the insulation panels are vacuum insulation panels.

19. A container as claimed in any preceding claim arranged to transport a product.

20. A method of forming thermally insulated containers for transporting products, the method comprising, for a first container type:

providing a mould tool having dimensions for moulding a main body of a first container type;

using the mould tool to mould a main body of a first container type from expanded foam; and

inserting cool packs around the inner surfaces of the main body of the first container type, and

for a second container type:

placing an insert or inserts within the mould tool for the main body of the first container type;

using the mould tool to mould a main body of a second container type from expanded foam, inserting insulation panels in the spaces in the main body formed by said insert or inserts and inserting cool packs around the inner surfaces of the main body or around inner surfaces defined by the insulation panels.

21. A method as claimed in Claim 20, further comprising placing an insulation panel in a space in the base of the main body formed by the insert or inserts.

22. A method as claimed in Claim 20 or 21, the method further comprising for a first container type:

providing a mould tool having dimensions for moulding a lid of a first container type; and

using the mould tool to mould a lid of a first container from expanded foam; and

for a second container type:

placing an insert or inserts within the mould tool for a lid of the first container type; and

using the mould tool to mould a lid of a second container type from expanded foam.

23. A method as claimed in Claim 22, further comprising inserting an insulation panel in the lid of the second container type in a space formed by the insert or inserts.

24. A method in accordance with any one of Claims 20 to 23 of producing a container in accordance with any one of Claims 1 to 19.