which the temperature in the interior is stable can be increased for well over 200 hours. The solution shown has proved particularly successful in the market for reusable transport containers.

A collapsible transport container from the air freight sector is described in Document EP 22 56 065 A1. The collapsed transport container can be returned for reuse in a space-saving manner. To ensure temperature-stable transport, insulation foams based on polyurethane or polystyrene are employed. The side walls are connected to each other by means of L-shaped rim portions. Thereby, part of the L-shaped portion presses the adjoining panel against the panel being provided with the L-shaped portion. By pressing the foamed panels against each other through an elastic portion, airtight closure of the transport container is achieved. A disadvantage of this technique is that the connection provides low mechanical stability due to the elastic L-shaped portion, e.g. against impacts during transport. Another disadvantage is that the insulation materials used exhibit inadequate insulating properties for many applications. Although the foamed insulating materials are appropriate for easily achieving airtight closure, airtight closure is also a disadvantage. For example, when dry ice is used as an additional cooling source, gas (air) must be able to escape from the interior to compensate for the excess pressure caused by the evaporation of the dry ice, which may otherwise destroy the container. The same applies to the compensation of pressure differences during air-freight transports.

Furthermore, a packaging container is known from Document US 3 327 882 A, which is closed by means of straps. From Document GB 2 500 657 A there is further known a thermally insulating packaging container which has handles in the area of the edges which can be unfolded in order to lift the packaging container from the pallet.

Embodiments of the present invention seek to provide a pallet container for the transport of temperature-sensitive products, which may generally overcome the disadvantages of prior art and is particularly suitable for the application of dry ice.

Embodiments of the present invention provide a pallet container for the transport of temperature-sensitive products in accordance with the independent claim. Advantageous embodiments are the subject-matter of the respective subclaims.

According to a first aspect, the invention encompasses a pallet container for the transport of temperature-sensitive products, wherein the pallet container comprises at least one side part, one bottom part, one top part and one lid part, each having at least one vacuum insulation panel disposed therein. The at least one side part, bottom part and top part comprise a common stop rim portion, against which stop rim portion the lid part comes to rest partially or fully circumferentially. The pallet container comprises at least one edge protection element for distributing a load applied by a tensioning element. Due to the configuration with a stop rim portion in combination with an edge protection element, a stable pallet container is provided due to the force applied by the tensioning element, which does not create an airtight closure. In this way, a pallet container is provided which may overcome the disadvantages of prior art in terms of the airtight closure and, in particular, can be filled with dry ice.

In accordance with an advantageous technical aspect, the stop rim portion comprises a projecting fold with an inner rim portion (with the surface normal pointing inwards) against which an outer rim portion (with the surface normal pointing outwards) of the lid part comes to rest in the closed state of the pallet container. The folded configuration may ensure secure positioning which prevents the lid part from slipping out of the tensioning element.

Advantageously, the side part, the bottom part, the top part and the lid part each comprise an outer cardboard layer and an inner cardboard layer, whereby the at least one vacuum insulation panel is disposed between the cardboard layers. The two cardboard layers advantageously are designed in such a way that the vacuum insulation panels are fully enclosed on the sides thereof.

According to a further technical aspect, the edge protection element comes to rest loosely against the outer cardboard layer or is firmly connected to the outer cardboard layer. The firmly embodied arrangement provides the advantage that the

lid part can be handled jointly with the edge protection element, while the loose arrangement provides advantages during transport.

Another preferred aspect is that the inner cardboard layer of the lid part comprises the outer rim portion. This aspect ensures that the inner cardboard layer rests against the inner rim portion and is tensioned against the inner rim portion by a force applied by the tensioning element to the outer cardboard layer.

The outer rim portion on the lid part is preferably formed by an edge running continuously over three sides with an inwardly offset partial portion. The fourth side, without an inwardly offset partial portion, is preferably placed on the bottom part, since the entire weight rests on this wide edge when the lid is placed on it.

Another advantageous aspect is that the inner cardboard layer includes receiving elements for refrigeration elements. For example, the receiving elements can be formed by U-shaped rails which are disposed relative to each other in such a way that the refrigeration elements can be inserted between them.

Advantageously, the edge protection element is made of cardboard or plastic. Both materials make it possible to realize a rigid configuration of the edge protection element and may be comparatively inexpensive to manufacture.

Particularly preferably, the tensioning element is configured as a length-adjustable tensioning belt or an elastic strap. The elastic strap, for example, can be made of a rubber material.

In accordance with an advantageous aspect, the pallet container comprises three (separate) adjacently disposed side parts. The separate side parts can be transported compactly stacked for transport and, thanks to the combination of edge protection element and tensioning element, may be provided with a good connection for use during transport.

Claims

1. Pallet container for the transport of temperature-sensitive products, which pallet container comprises at least one side part, one bottom part, one top part and one lid part, each having at least one vacuum insulation panel disposed therein, and wherein the at least one side part, the bottom part and the top part comprise a common stop rim portion, against which stop rim portion the lid part comes to rest partially or fully circumferentially, characterized in that the pallet container comprises at least one edge protection element in order to distribute a load applied by a tensioning element.

2. Pallet container according to claim 1, wherein the stop rim portion comprises a projecting fold with an inner rim portion against which an outer rim portion of the lid part comes to rest in the closed state of the pallet container.

3. Pallet container according to claim 1 or 2, wherein the side part, the bottom part, the top part and the lid part each comprise an outer cardboard layer and an inner cardboard layer, between which the at least one vacuum insulation panel is disposed.

4. Pallet container according to claim 3, wherein the edge protection element comes to rest loosely against the outer cardboard layer or is firmly connected to the outer cardboard layer.

5. Pallet container according to claim 3, wherein the inner cardboard layer of the lid part includes the outer rim portion.

6. Pallet container according to claim 2, wherein the outer rim portion on the lid part is formed by an edge running continuously over three sides with an inwardly offset partial portion.

7. Pallet container according to Claim 3, wherein the inner cardboard layer comprises receiving elements for refrigeration elements.

8. Pallet container according to one of the preceding claims, wherein the edge protection element is made of cardboard or plastic.

9. Pallet container according to one of the preceding claims, wherein the tensioning element is a length-adjustable tensioning belt or an elastic strap.

10. Pallet container according to one of the preceding claims, having three unitary or separate side parts being disposed adjacent to one another.

11. Pallet container according to one of the preceding claims, wherein the edge protection element has a length corresponding to a side length of the pallet container.

12. Pallet container according to one of the preceding claims, wherein the edge protection element is configured in one piece or in multiple pieces, and wherein the edge protection element completely encloses at least one side of the pallet container.

13. Pallet container according to one of the preceding claims, wherein the edge protection element includes two portions being arranged at right angles to one another.

14. Pallet container according to one of the preceding claims, wherein the two portions being arranged at right angles to one another have a width in the range from 3 cm to 15 cm.

15. Pallet container according to one of the preceding claims, wherein the edge protection member is cut at at least one end portion at an angle

in the range of 15° to 100° with respect to a longitudinal axis of the edge protection member.