

**Well advised, safely packed**



**Transporting temperature-sensitive products safely and reliably**

**An inexpensive standard, or a  
tailored special solution – you've come  
to the right place!**



# Secure packaging systems to meet every need



With OHLRO's shipping packaging – specifically developed for medical products – you ensure cold chain compliance for a wide range of temperature requirements and transport times. Our packaging systems are field-tested, reliable and made of the highest quality insulating materials. We also offer optional accessories such as cooling accumulators (PCMs – Phase Change Materials) and loggers for temperature recording.

When developing the range, the key focus was on ensuring that we can offer you the highest possible level of transport safety and reliability in terms of the temperature and transit time factor, even with extreme temperature profiles and lengthy shipping routes. This makes the packaging especially suitable for shipping clinical trials.

Whether you ship your products by air, rail, road or sea, you'll always be on the safe side with our special packaging for medical products.

Every transport item has its own requirements and requires the right shipping solution. We will be happy to provide you with a special offer tailored to your individual needs.

On request, we will be pleased to carry out a temperature measurement for you before practical deployment (see under "Qualifications at OHLRO").

We will be happy to help you find the optimal shipping solution for your product. Feel free to give us a call!



## EPS insulated boxes – excellent insulation properties at a favourable price

These standard boxes are available in pre-set sizes from 3.6 l to 170 l, and are suitable for shorter transport times.

These are stock items, which means that the boxes are available with a short delivery time – a good choice, for example, for clinical trials. Storage at your premises is, therefore, not necessary.

In addition to such favourable prices, you benefit from another advantage: the packaging's low weight. This also leads to cost savings in transport, especially for air freight.

Equipped with dry ice, the desired transport temperature can be maintained over a longer period of time.

You can order the boxes easily and quickly via our online shop. Depending on the quantity in question, shipping is carried out by parcel service provider or freight forwarder.



Click here to go to our EPS insulated boxes online.

The current selection of sizes and panel thicknesses for our EPS insulated boxes, as well as information on the boxes' load capacity, can be found on our website.



## MediSafe – controlling the temperature with PCM coolbricks

Our MediSafe boxes are suitable for the temperature range +2°C to +8°C. The boxes come in four sizes. The combination of polystyrene box, vacuum panels and PCM coolbricks enables the controlled maintenance of a desired temperature.



More information about PCM coolbricks, cooling elements and dry ice can be found here.



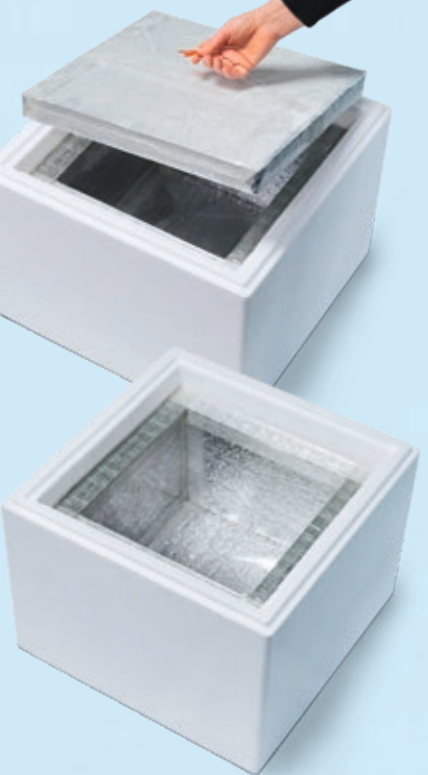
Temperature range:  
+2°C to +8°C



Cooling period:  
at least 94 hrs

MediSafe boxes	Outer dimension	Inner dimension	Panel thickness	Measurement protocol
OHLRO MediSafe S	440 x 340 x 260 mm	280 x 185 x 98 mm	20 mm	At least 96 hrs
OHLRO MediSafe M	480 x 480 x 380 mm	250 x 250 x 150 mm	40 mm	At least 94 hrs
OHLRO MediSafe L	570 x 450 x 410 mm	340 x 225 x 180 mm	40 mm	At least 120 hrs
OHLRO MediSafe XL	790 x 590 x 360 mm	520 x 320 x 90 mm	40 mm	At least 120 hrs

All MediSafe boxes are available with outer packaging (cardboard). The cardboard was not taken into account in the external dimensions.



## MediSecure – masters different temperature requirements

Our high-quality OHLRO MediSecure boxes for different temperature requirements are available in four different sizes.

The combination of polystyrene box and vacuum panels enables a long-term temperature retention at a wide range of outdoor temperatures. This makes them suitable for even the most difficult climatic conditions. You can use the boxes with individual coolants (e.g. dry ice etc.)



Temperature range:  
variable

MediSecure	Outer dimension	Inner dimension	Panel thickness
MediSecure 10 l	440 x 340 x 260 mm	320 x 225 x 140 mm	20 mm
MediSecure 20 l	480 x 480 x 380 mm	310 x 310 x 210 mm	40 mm
MediSecure 27 l	570 x 450 x 410 mm	400 x 285 x 240 mm	40 mm
MediSecure 33 l	790 x 590 x 360 mm	580 x 380 x 150 mm	40 mm

All MediSecure boxes are available with outer packaging (cardboard). The cardboard was not taken into account in the external dimensions.



Temperature ranges:  
+2°C to +8°C  
+25°C to +15°C

## MediBag – Transport bag for medicines requiring refrigeration

Anyone who has to administer medicines themselves that require refrigeration knows that this is problematic when travelling. OHLRO offers the right solution: The medicines are transported safely within the cold chain and it is possible to access them flexibly.

The cooling technology in use offers extended temperature maintenance even in warm outside temperatures. If required, a data logger can also be carried, which continuously records and thus logs the internal temperature.

The MediBag is available for two temperature ranges.

### Facts and figures:

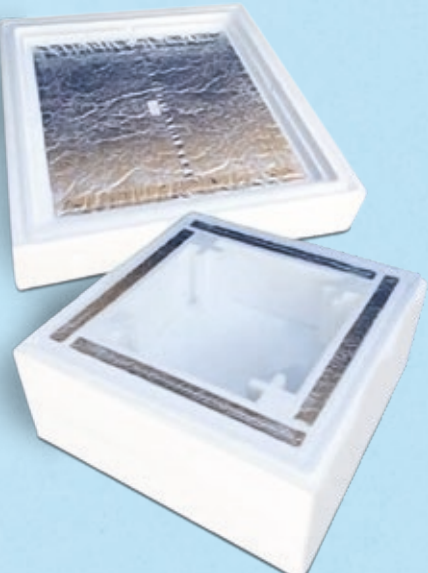
- Outer dimension: 370 x 230 x 230 mm
- Inner dimension: 270 x 165 x 80 mm
- Volume: 3.5 l
- Panel thickness: 30 mm

### Performance data:

- MediBag +2°C to +8°C: approx. 14 hrs.
- MediBag +25°C to +15°C: approx. 11 hrs (in each case according to packaging instructions).

### Scope of delivery, each:

- blue shoulder bag
- Polystyrene box and inlay
- Cooling elements or accumulators suitable for the selected temperature range



## The O-BOX-H250 concept: Individually adapted to your needs

Our O-BOX H250 system offers you a high-performance insulation box that can, for example, maintain a constant temperature range of between +2°C and +8°C over a period of 250 hours.

Polystyrene and combined cooling technology: Hollow chambers with vacuum units are located on all outer panels, thereby optimally preventing heat exchange with the outside world. Our patented cooling system ensures a constant temperature inside the box over a long period of time.

The boxes are customised to customer needs; therefore, no small quantities are available. If you are interested, please feel free to contact us. Together, we will find the optimal solution for shipping your product.



Winner 2018: The cooling period of up to 250 hrs at temperatures ranging from +2°C to +8°C, as proven by tests, was recognised with an industry award.



Temperature range:  
variable



Cooling period:  
up to 250 hrs

### Patented advantages:

- 250 hrs constant temperature
- Non-breakage during transport
- No slipping of cooling packs
- Protection against the cold, even in the corners
- Shock-proof vacuum panels
- Robust quality



# Proven safety: Qualifications at OHLRO

Once you have found the right packaging solution for shipping your temperature-sensitive products, it can be useful to test its performance in advance. This is because, in doing so, you can be quite sure that the shipping conditions are optimally suited to your product. OHLRO has its own climate chamber for this purpose. These tests, also known as “qualifications”, can be carried out with varying degrees of effort.

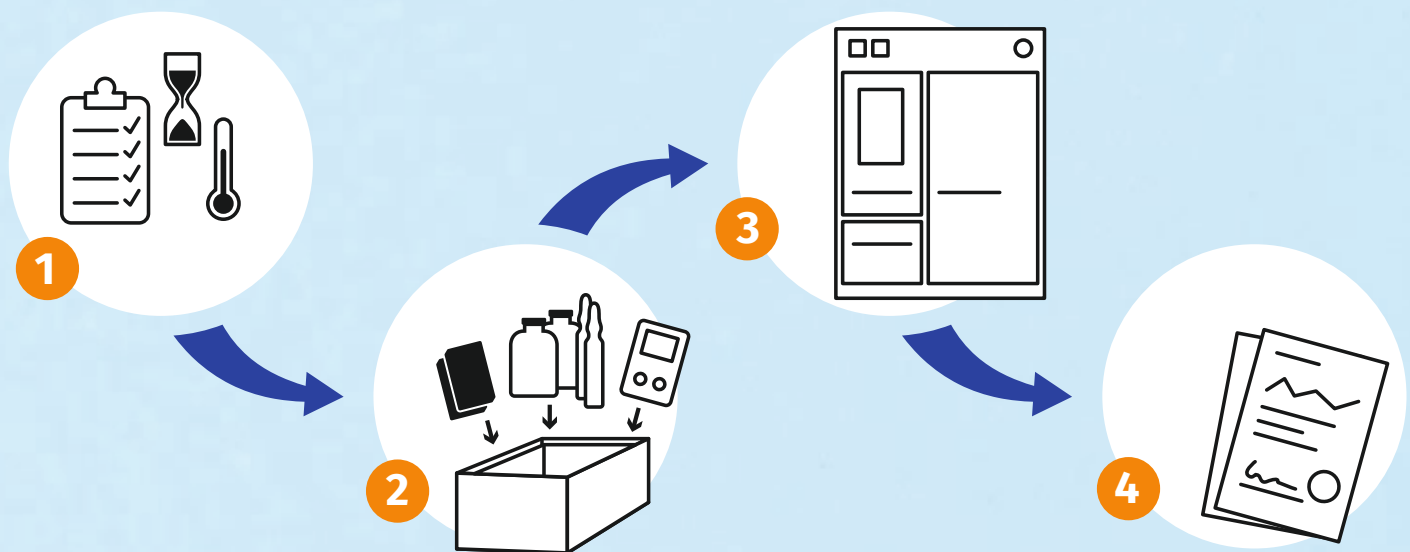
## Stress measurement – The basic solution

The stress measurement is a simple check of the transport temperature. For this purpose, a shipping box is equipped with qualified measuring instruments and is appropriately set up and stocked with products. The temperature in the

climate chamber is then measured over a set period of time. This can be either 24 hours or a multiple thereof. As a result, you get the recorded temperature curve and the measurement data.

## Validation offers enhanced safety and reliability – here's how:

You can learn more about the more comprehensive process of a validation by looking at the following graphic:



**1** At the beginning of the qualification process, a planning protocol is prepared that contains all specifications for the desired test scenario. The packaging is designed according to these specifications.

**2** In the next step, the cooling elements and the goods to be shipped are brought to the desired temperature and the shipping box is filled. In addition, measuring probes are set up at previously defined measuring points.

**3** The filled shipping box is now placed in our climate chamber for the time you have ordered. A total of three valid test runs are carried out. The ISTA 7D winter/summer temperature profiles are used for this purpose.

**4** Finally, a test report is then prepared. It meticulously documents all details of the tests, including temperature curves, photos, serial numbers of the loggers and signatures of the employees entrusted with the test series.



## Well advised, safely packed

**The optimal solution for shipping temperature-sensitive goods varies, depending on the desired transport temperature, transport duration and packaging size. That is why an individual consultation is particularly important here.**

At OHLRO, you benefit from more than 30 years of experience in the production of packaging made from airpop®. Throughout Europe, airpop® is the uniform term for the material EPS (expandable polystyrene), also known as Styropor®.

### **Our many satisfied customers appreciate this:**

- An excellent price-performance ratio
- A wide range of standard shipping boxes
- Competent advice
- Accompanying temperature tests and sample shipment
- Individual shipping concepts
- Expertise and creativity in the development of special forms
- Coordinated supplementary material – all from a single source: Cardboard, coolants, filling material and also printed adhesive tapes
- Short delivery times

**[www.medilogisticsystems.com](http://www.medilogisticsystems.com)**



### **The advantages of airpop®:**

- Low weight
- High insulating capacity
- Strong protective function
- High impact resistance
- No pollutants
- Food-safe

### **Environmental footprint:**



- Low raw material and material input
- Recycling rate 50 %
- Less fuel consumption/CO<sub>2</sub> emissions during transport due to low weight



**Find out** more about the benefits of packaging made from airpop®



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happy to advise you:  
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