



Ideal storage conditions for Medicool® cool packs illustrating appropriate air circulation

General specification

- Polyethylene/EVA blended polymer bag - heat sealed
- Polyether foam core
- 0°C water based PCM*

* PCM contains 0.20%(+/-0.05%) LA0614 Acticide content (see www.laminarmedica.co.uk for Materials Safety data sheet)

Laminar Medica Limited

A CliniMed Group Company

Laminar Medica specialises in the design, manufacture and validation of insulated shipping systems used by the pharmaceutical and biotech industries globally.

These systems protect vaccines, drugs, blood and associated medical products from the extremes of temperature during transportation.



El logotipo de pingüino es una marca registrada de CliniMedicología Limited



ISO9001:2000 FM28012



THE QUEEN'S AWARDS FOR ENTERPRISE 2004

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Delivery

Larger Medicool® cool packs, (MC-3T, MC-3S, MC-28T, MC-28S, MC-90, and MC-95), which are encapsulated in corrugated cartons, are supplied in a strong outer shipping carton on pallets. The smaller Medicool® cool packs, (MC-3, MC-10, MC-11, MC-15, MC-20 and MC-28), are packed in strong outer shipping cartons, in quantities described in this leaflet, and then supplied on pallets. Cool packs can be split from the pallet container and stored individually on shelves in a controlled temperature facility.

Do not use sharp blades or knives when splitting containers as they could damage the watertight polymer envelope.

Preparation

Freeze or refrigerate cool packs as described in your packaging qualification study report or the packaging instructions.

- Frozen Medicool® packs should be stored until normalised in a suitably specified storage environment at -18°C (+/-5°C) unless otherwise specified in your packaging qualification study report.

- Refrigerated Medicool® packs should be stored until normalised at +5°C, (+/-3°C) unless otherwise specified in your packaging qualification study report.

- It may be necessary to condition frozen Medicool® packs at controlled room temperature (+22°C, +/-5°C) for a period of time before use in a 2°C to 8°C shipping system to avoid "cold shock". Larger Medicool® packs are typically specified for 60 minutes and smaller ones for 30 minutes.

Recommended storage instructions

Medicool® packs supplied in shipping cartons should be stored on conditioning shelves so that free air (50mm minimum) can circulate around the cartons.

- Individual Medicool® packs should be stacked flat on storage shelves no more than 4 high, with 50mm of free air circulation. Alternatively, they can be kept in their outer shipping cartons.

- Laminar Medica recommends the following minimum storage periods for

cool packs:
Frozen (-18°C, +/-5°C) - 48 hours.
Refrigerated (+5°C, +/-3°C) - 24 hours.

These normalising periods are provided for guidance only and this information is based on ideal laboratory conditions.

Laminar Medica will be happy to evaluate your storage arrangements or your refrigeration supplier will be able to help to ensure you have appropriate conditions.

Handling

CAUTION
Do not freeze Medicool® products below -40°C as this can cause failure of the watertight envelope.

- Please handle Medicool® packs with care, particularly when frozen, to avoid damage which could render them unserviceable. Abusive handling - for example - dropping frozen Medicool® packs, storage on rough, sharp or abrasive surfaces may puncture the watertight polymer envelope and cause refrigerant leakage.

- Take particular care if Medicool® packs freeze together. Separate them manually and avoid the use of sharp objects of any kind which could puncture the polymer envelope.

Re-use

Medicool® packs can be re-used if handled with care. Two checks are required - a visual inspection to make sure the polymer envelope is not damaged and a weight check is required. Target weights and acceptable tolerances are provided on pages 2 and 3.

- Inspect Medicool® packs carefully - punctures may not be obvious in cool packs that are frozen.

If in doubt, always replace suspect Medicool® packs with new ones.

Condensation control

Condensation is caused by thawing where fluctuating temperature, humidity or moisture exists. Condensation control can be incorporated into the design of insulated shipping systems. In the case of large Medicool® packs higher levels of condensation are absorbed by the corrugated outer carton.

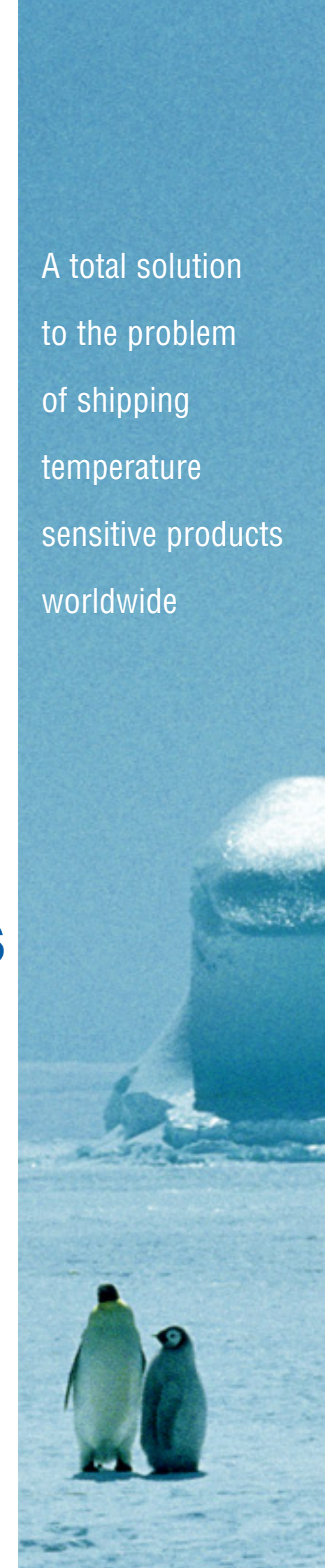


laminarmedica

insulated shipping systems

A total solution to the problem of shipping temperature sensitive products worldwide

MEDICOOL® PHASE CHANGE COOL PACKS



MEDICOOL® COOL PACKS

The Medicool® cool pack range is manufactured in-house by Laminar Medica according to ISO9001:2000 Quality Management System. This range of 0°C phase change materials (PCMs) has been developed to compliment our extensive range of Meditherm®, Chilltherm® and VacTherm® temperature controlled packaging (TCP). They are used globally by the pharmaceutical and biotech industries for maintaining the cold chain at “chilled” temperatures, eg. 2-8°C. Typical applications include keeping vaccines, drugs, blood and associated medical products at controlled temperatures during transportation.

We have extensive temperature testing facilities and undertake customer specific qualification studies with the Medicool® cool pack range combined with our broad range of TCP products. Or, if a quick solution is needed, we can supply off-the-shelf validations for our Chilltherm® range.

The Medicool® range is manufactured from non-hazardous, water based phase change material and encapsulated in flexible, recyclable plastics. Larger sizes are additionally contained in rigid corrugated cartons to facilitate easier handling, packing and to absorb higher levels of condensation.

The PCM releases and absorbs a large amount of latent heat energy (335kJ/Kg) as the Medicool® packs phase (melt / thaw), providing efficient, practical temperature stability for “chilled” temperature sensitive products.

Standard range



Medicool® MC-3

Product code LM000034
 A - 320mm
 B - 170mm
 C - 35mm
 Nominal weight - 1100gm
 Tolerance - +/-20gm
 Shipping quantities - 12 carton/276 pallet



Medicool® MC-10

Product code LM000120
 A - 145mm
 B - 130mm
 C - 35mm
 Nominal weight - 300gm
 Tolerance - +/-20gm
 Shipping quantities - 40 carton/920 pallet



Medicool® MC-11

Products code LM000030
 A - 220mm
 B - 130mm
 C - 35mm
 Nominal weight - 525gm
 Tolerance - +/-20gm
 Shipping quantities - 20 carton/460 pallet



Medicool® MC-15

Product code LM000031
 A - 160mm
 B - 145mm
 C - 35mm
 Nominal weight - 400gm
 Tolerance - +/-20gm
 Shipping quantities - 30 carton/690 pallet



Medicool® MC-20

Product code LM000032
 A - 270mm
 B - 130mm
 C - 35mm
 Nominal weight - 650gm
 Tolerance - +/-20gm
 Shipping quantities - 20 carton/460 pallet

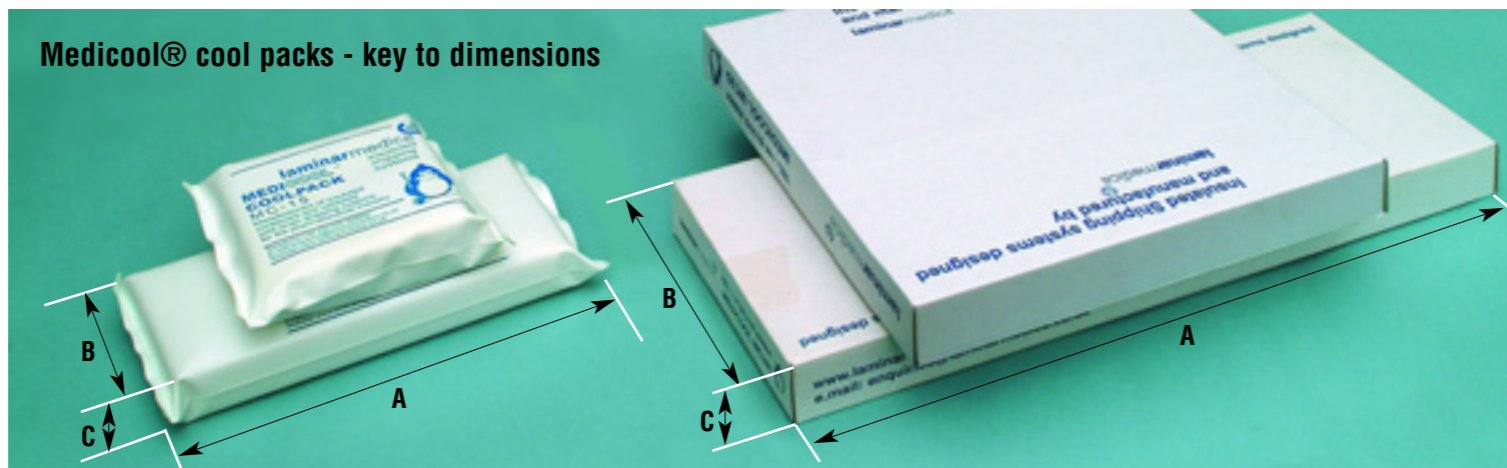


Medicool® MC-28

Product code LM000033
 A - 185mm
 B - 170mm
 C - 35mm
 Nominal weight - 600gm
 Tolerance - +/-20gm
 Shipping quantities - 18 carton/504 pallet



Medicool® cool packs - key to dimensions



Carton encapsulated range



Medicool® MC-3D

Product code LM000092
 A - 290mm
 B - 290mm
 C - 40mm
 Nominal weight - 2325gm
 Tolerance - +/-40gm
 Shipping quantities - 168/pallet



Medicool® MC-3S

Product code LM000054
 A - 440mm
 B - 290mm
 C - 40mm
 Nominal weight - 3410gm
 Tolerance - +/-25gm
 Shipping quantities - 108/pallet



Medicool® MC-3T

Product code LM000035
 A - 450mm
 B - 290mm
 C - 40mm
 Nominal weight - 3410gm
 Tolerance - +/-25gm
 Shipping quantities - 108/pallet



Medicool® MC-20D

Product code LM000095
 A - 240mm
 B - 240mm
 C - 44mm
 Nominal weight - 1370gm
 Tolerance - +/-40gm
 Shipping quantities - 212/pallet



Medicool® MC-28S

Product code LM000096
 A - 440mm
 B - 170mm
 C - 40mm
 Nominal weight - 1890gm
 Tolerance - +/-60gm
 Shipping quantities - 186/pallet



Medicool® MC-28T

Product code LM000067
 A - 450mm
 B - 170mm
 C - 40mm
 Nominal weight - 1890gm
 Tolerance - +/-60gm
 Shipping quantities - 186/pallet



Medicool® MC-90

Product code LM000036
 A - 430mm
 B - 380mm
 C - 30mm
 Nominal weight - 3180gm
 Tolerance - +/-25gm
 Shipping quantities - 100/pallet



Medicool® MC-95

Product code LM000037
 A - 495mm
 B - 380mm
 C - 30mm
 Nominal weight - 3390gm
 Tolerance - +/-25gm
 Shipping quantities - 100/pallet