



Ten-Lead Foam Brick Ice Pack

FUJIAN TEN-LEAD ADVANCED MATERIAL CO., LTD.
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Ten-Lead Foam Brick



Company Introduction

Fujian Ten-lead Advanced Material Co., Ltd. is a high-tech enterprise integrating R & D, production and marketing. We are focused on the cold chain coolant design of 0 degrees, 2 to 8 degrees, minus 12 degrees and minus 21 degrees, and had accumulated enough knowledge and experience of this product on research, development and manufacturing. At the same time, our company cooperated with the Chinese Academy of Sciences and foreign professional storage research institutions to continue to achieve new and fruitful results relying on independent innovation. Now we are offering the coolant to a number of professional cold chain companies in Chinese market , and has been widely recognized and praised the market.

Ten-Lead Foam Brick



Company Introduction

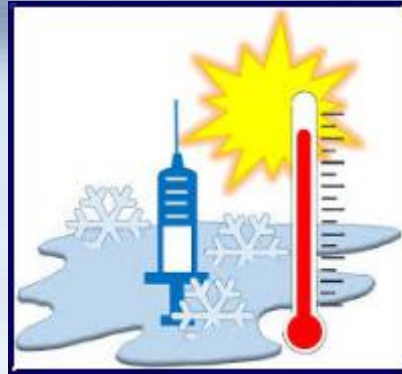
Our coolant has made great breakthroughs in latent heat, quenching phenomenon and condensed water problem. The temperature controllability has passed the safety performance test and are top ranked products in Chinese market, also we had our own independent product patent.

Ten-lead company has always pursuit such concept of "product safety, service-oriented" and take "do first-class products, set new ethos for the Industry" as the development goals, we bravely forward, only for the glory that goods can be arrived softly in a given period of time and the passion for a better life!

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Qualification



New Insulation packing design team -----VIP+PU/PU/EPS/ Insulated box service

New PCM R&D work team-----Safe latent heat+High-end coolant service

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Foam brick application

Ten-lead foam brick fit with the professional designed, insulated box can be used for the various urban distribution and cold chain transportation of human and animal vaccines, biological agents, biological drugs, living cells, animal and plant specimens, plasma, blood products, human stem cells etc.



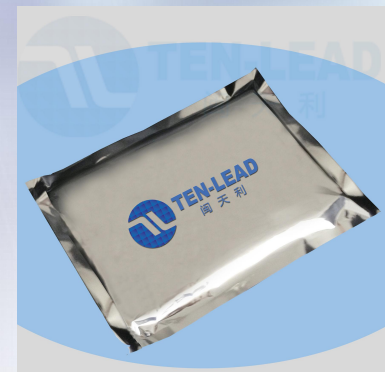
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Ten-lead foam brick is a kind of phase change material with shape heat sealed plus environmental friendly rigid carton or plastic cartridges or ductile aluminum foil outside. Usually there are ecological and safe water-based inks printing labels.

Remarks:

The foam brick packed with aluminum foil sealed can't need to do second packing outside.



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Foam brick type



5°C Refrigeration warm type ice pack

0 °C Frozen type ice pack

-12°C Frozen type ice pack

-18°C Frozen type ice pack

-22°C lower temperature Frozen type ice pack

-50°C lower temperature Frozen type ice pack

Ten-Lead Foam Brick

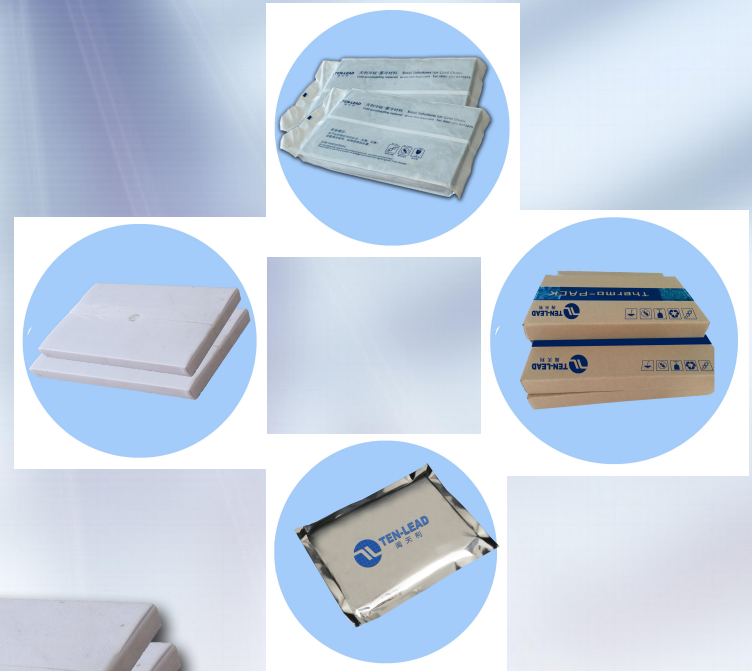


Foam brick ice pack

Packing:

We have one time use carton packing and multi-use rigid plastic box packing for option.

We select proper packing ways according to the different products and save cost for you.



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Partial Parameters for reference

Product Type	Freezing Point (℃)	Temperature Range (℃)	Frozen Temperature (℃)	Area applied
Refrigeration type	5℃	2~8℃	Heat above 10℃ ambient temperature	The medicine and vaccine which transpored i n winterand need to be stored at 2~8℃.
Refrigeration type	0℃	2~8℃	frozen under (-5)℃	The medicine which transpored in other seas on and need to be stored at 2~8℃.
Frozen in low temperature	(-12)℃	(-12)℃ ~(-18)℃	frozen under (-20)℃	no limited in airline, suitable for under -12℃ frozen requirment
Frozen type	(-18)℃	(-12)℃ ~(-18)℃	frozen under (-20)℃	no limited in airline,suitable for around -18 ℃ frozen requirment
Frozen in low temperature	(-22)℃	(-18)℃ ~ (-22)℃	frozen under (-27)℃	no limited in airline,suitable for under -18℃ frozen requirment

Ten-Lead Foam Brick TEN-LEAD 闽天利

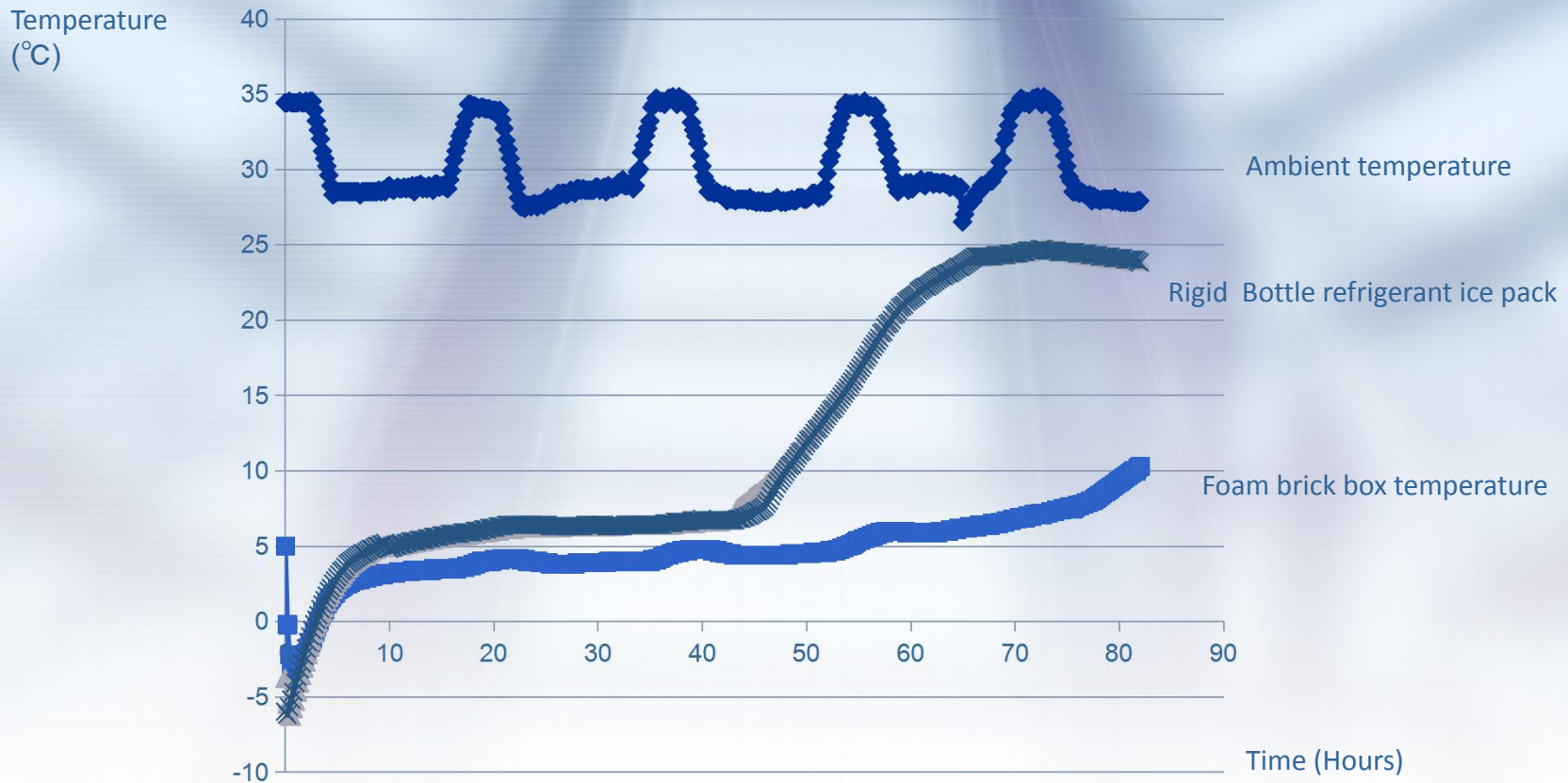
Partial Products

Picture for reference	Temperature (°C)	Ice pack size(mm)	Weight(kg)
	5°C	295x150x30	1000
	5°C	245x145x30	800
	5°C	210x110x30	500
	5°C	235x105x30	550
	0°C	295x150x30	1250
	0°C	245x145x30	1000
	0°C	210x110x30	650
	0°C	235x105x30	700
	(-18) °C	295x150x30	1400
	(-18) °C	245x145x30	1100
	(-18) °C	210x110x30	750
	(-18) °C	235x105x30	800

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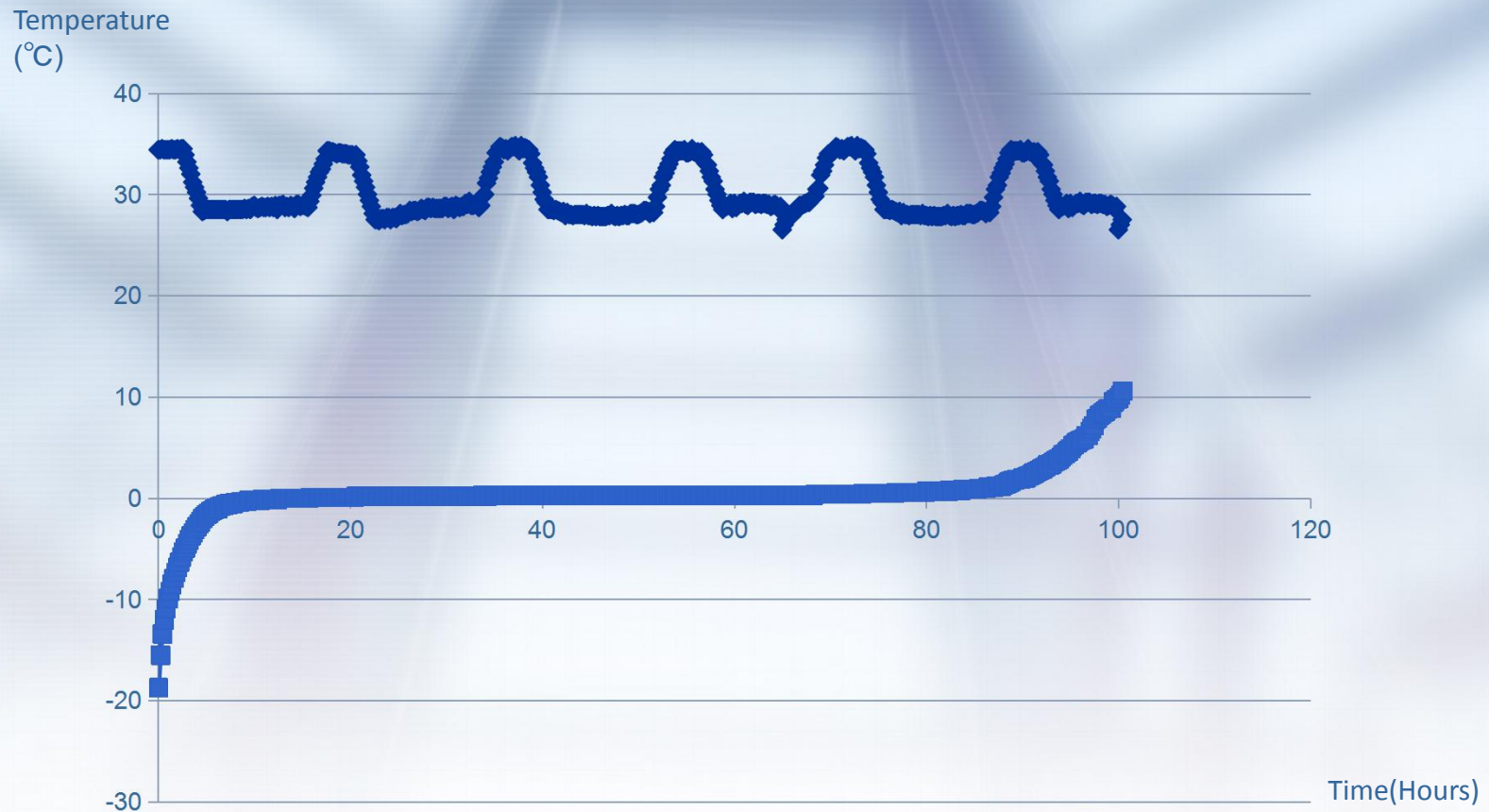
Typical temperature & lasting time curve of foam brick (5 °C)



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Typical temperature & lasting time curve of foam brick(0 °C)

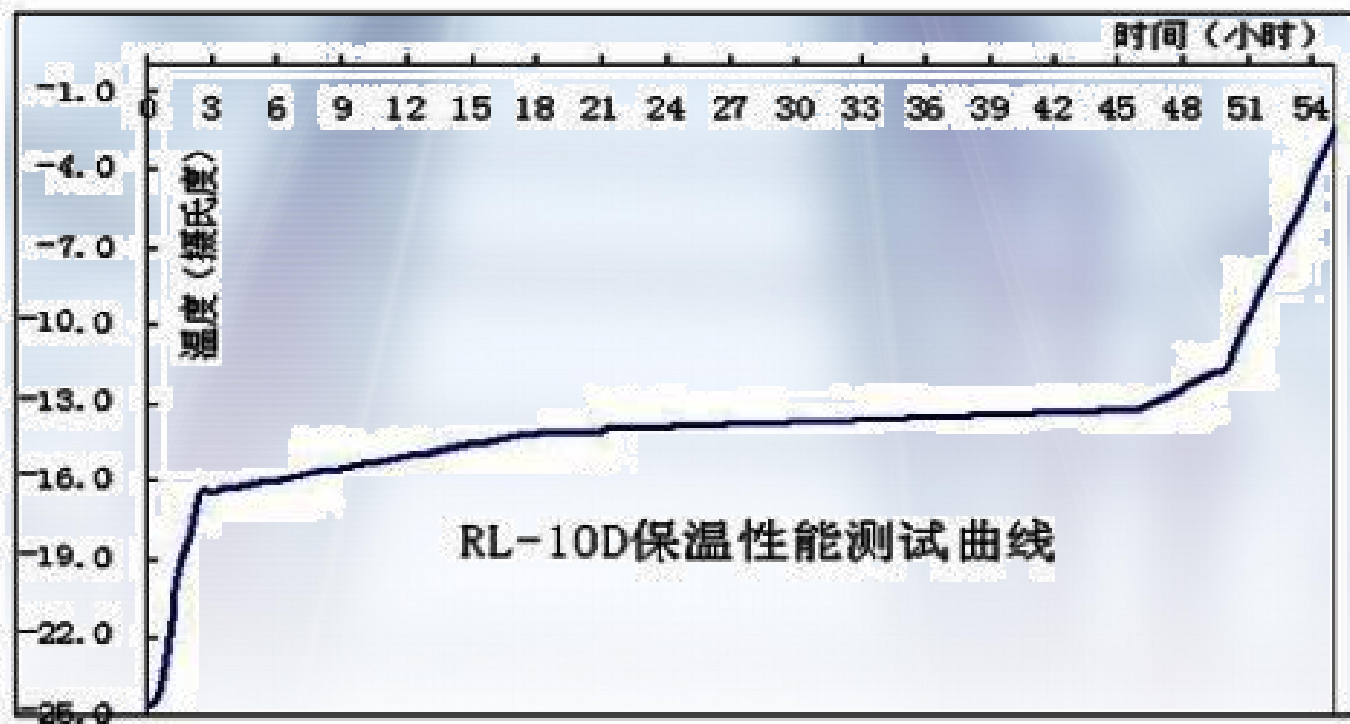


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Typical temperature & lasting time curve of foam brick(-18 °C)

-18℃冷冻型蓄冷剂释冷过程典型温度变化曲线图

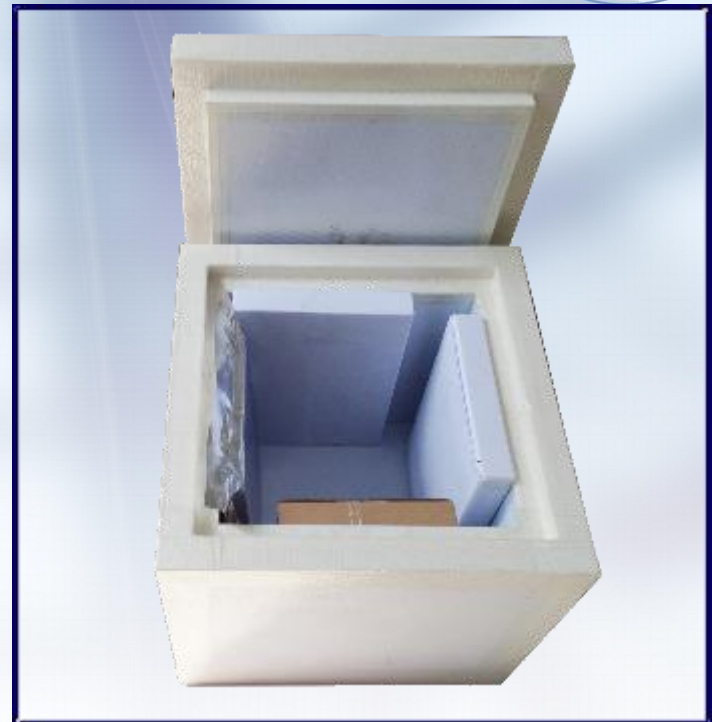
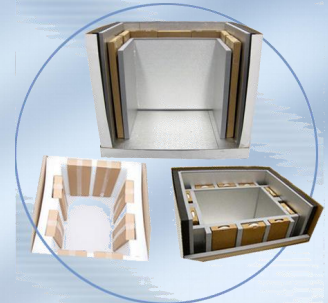


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Advantages of the foam brick

It will never deform during the frozen or thawed condition, always be with regular shape, easy to disposal and no leakage, frozen fast, slow release, can effectively reduce the condensation and keep the box dry



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Advantages of Ten-lead foam brick

The latent heat of phase change and energy of cold storage are large
No salt precipitation and supercooling, and stable phase temperature.
Low expansion, in frozen and thawed status, no change in volume



No deformation , no
water drop while
placed on level



Good overall compressive
strength, durable plastic
box ensure a good
protection for multiple use



can carry to the plane
without transport
restrictions for breast-milk,
special pharma etc.

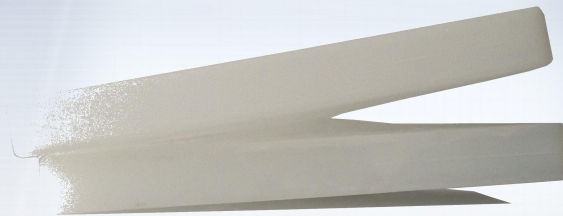
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Safe and non-toxic, non-polluting, even if the bag is broken, there will be no liquid leakage, no air transportation control; Cost-effective, can be reusable, repeat the freezing and cold release experiments, the storage capacity attenuation is not more than 2.57%.

Comparison Performance after fast freezing among the energy storage ice pack, rigid plastic pack and foam brick



Energy storage pack



Rigid plastic pack



Foam brick

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Ten-lead foam brick is the latest advanced cold accumulating material applied in cold chain industry which following the energy storage and biological ice packs, the most popular, safe and economical products prevail for the temperature sensitive products which the suitable temperature is from 2 to 8 centigrade like pharma and vaccine. We do a innovation and upgrade the outer packing on the traditional carton packaging basis, that made it can be more easily recognized and used by many clients due to the non-changing shape and lower cost.

Big space left to the box wall due to the slight deformation after freezing, shaking problem and slippery risk may be occurred



Normal ice floe



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Ten-lead foam can be very close to the wall and without shaking, particularly suitable for temperature sensitive products that reject the vibration.

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Take the insulated box with a size of 20*20*20cm for example, biological ice bag 3.5kg can put in this 8 liter box, however, foambrick 6kg can be put in same box, that is it can extend the cold insulation time of about 71.4% on condition no volume and no freight increasing, or it can decrease the package space of 71.4% on condition of same cold insulation time, in one word, it can save the freight cost of 71.4%

8 liter insulated box:
normal ice pack can put in is 3.5kg



8 liter insulated box:
Ten-lead foam brick ice pack can put in is 6kg

Ten-Lead rigid bottle pack



Rigid bottle pack

Ten-lead also developed 5 °C warm ice, and 0 °C, -5 °C, -12 °C, -18 °C, -22 °C and low-temperature used like -50 °C and other related degrees products packed in rigid bottles, compared with the energy storage ice pack and biological ice pack, they have obvious advantages like enough cold storage capacity, uniform cooling, clean, non-toxic, they are similar with Ten-lead foam brick ice pack, also widely used in vaccines, insulin, blood, low-temperature food and other frozen goods which requires preservation and distribution. Same features like others, there is a slight deformation after freezing, can not carry on the plane due to becoming liquid after thawing.



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Rigid ice pack type

- 5°C Refrigeration warm type ice pack
- 0 °C Frozen type ice pack
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Partial Products

Picture	Temperature (°C)	Ice pack size(mm)	Weight(kg)
	5°C	230x180x25	780
	5°C	350x200x20	1000
	0°C	230x180x25	900
	0°C	350x200x20	1300
	(-18) °C	230x180x25	1200
	(-18) °C	350x200x20	1500

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Acurate temperature Control, safe arrival to future!

Thank you!

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