POLAR ICE

User Manual

Contents

The Characteristics of Polar Ice

What makes Polar Ice Unique?

- Easy to Use: Just add water, and place in the freezer to enjoy crystal clear ice.
- Convenient：Unique patented design allows for easy retrieval of ice.
- Multi-purpose: Versatile, customizable components adjust to your desire, able to make ice in a large assortment of shapes and sizes.

The Concept of Polar Ice

Mimicking the natural ice formation patterns of lakes and rivers, Polar ice begins freezing from the surface layer, while the water below remains unfrozen. (Much like the bottom of a pond.) The Polar Ice Icebox has an insulated bottom, so that only the surface of the water is exposed to the cold. By allowing the water to freeze from top to bottom, layer by layer, air and impure substances are compressed to the bottom. They then form a layer of “white” or opaque ice, which can easily be removed.

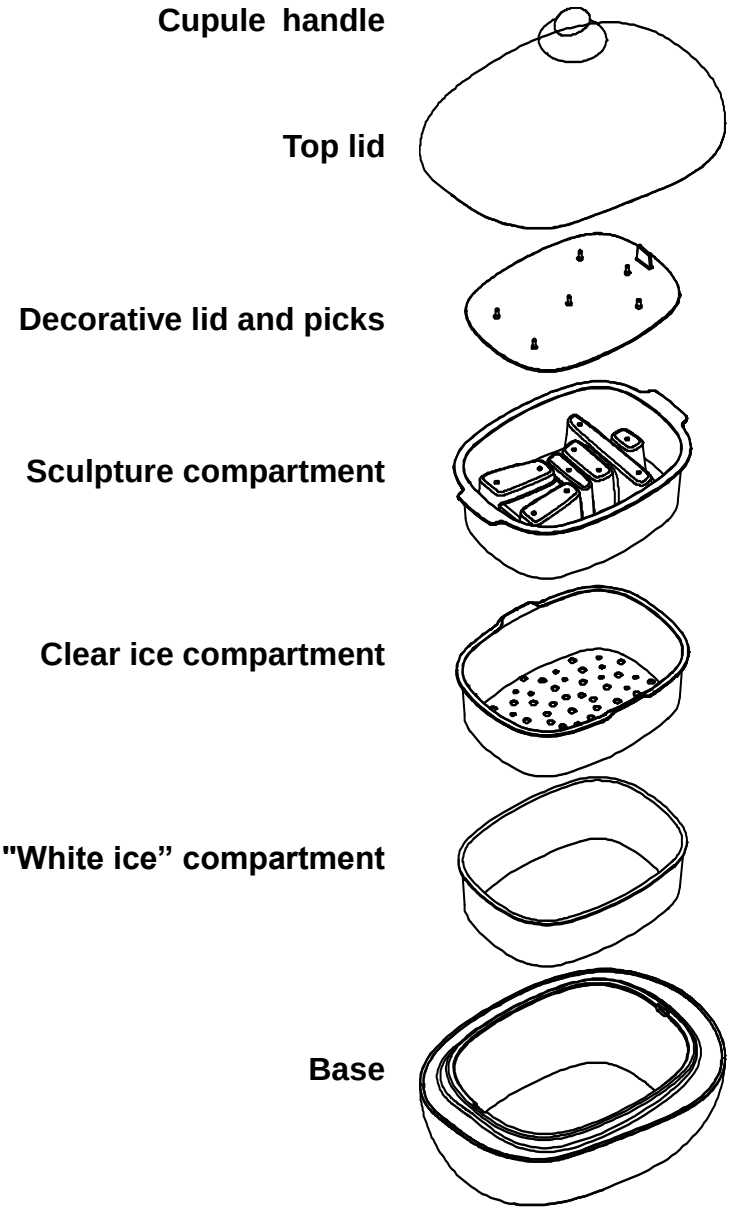
⚠ Precautions

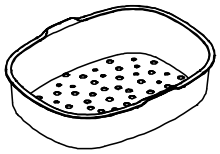
- When using for the first time, please cleanse with detergent and water before use.
- Please cleanse with soft cloth or sponge, do not scrub with rough objects such as bristled brushes to avoid scratching, which may make ice more difficult to remove.
- Keep box away from heat sources as it is made out of plastic.
- Fill with chilled or room temperature water, please do not fill with hot water.
- Non-microwavable, do not place in ovens.
- This product is designed exclusively for producing ice; please do not use it for other purposes.
- The transparency of the ice, and the time it takes to freeze will vary depending on the water quality or the freezer it is placed in.
- Handle ice sensibly to avoid frostbite.
- Falls from high places or heavy impact will damage and crack the casing.
- If the ice is hard to remove, flush bottom of box with water or leave in room temperature for 1-3 minutes. Then slide ice out gently, if removed with brute force, ice may crack.

Specification

Dimensions of Casing (outer)：	L 229 x W 183 x H 134 mm
Dimensions of Casing (inner)：	L 174 x W 134 x H 55 mm
Dimensions of Ice：	Ice Block：600 ml Ice Sculpture：250 ml
Materials：	Food container plastics PP
Colors：	Black, White

Composition and Function

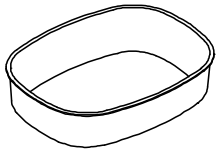




Clear Ice compartment

Material: PP

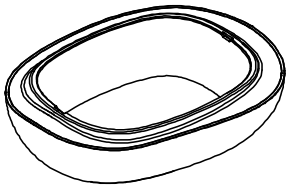
Main function: With small holes on bottom. To hold the clear ice mass.



“White Ice” compartment

Material: PP

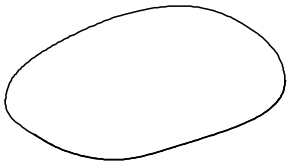
Main function: To hold opaque ice mass.



Base

Material: ABS Insulating

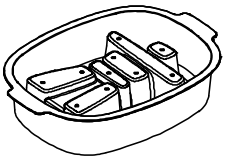
Main function: to insulate the bottom of the ice box for controlling how the ice begins freezing. It can also double as an ice bucket in room temperature.



Top lid

Material: ABS Insulating

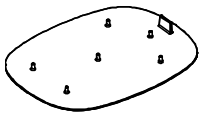
Main function: to act as the lid for the ice bucket.



Sculpture compartment

Material: PP

Main Function: to act as a mould to shape the ice.



Decorative lid and picks

Material: PP

Main Function: to prevent the ice from rising during production, compresses ice. Protruding pick aids in the removal of ice.

Cupule handle

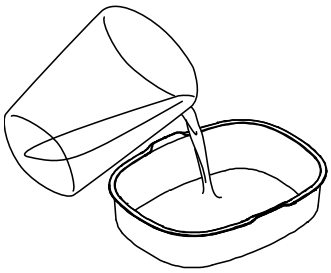
Material: Silicone

Main Function：Sticks to container for easy ice removal.

How to Make Polar Ice

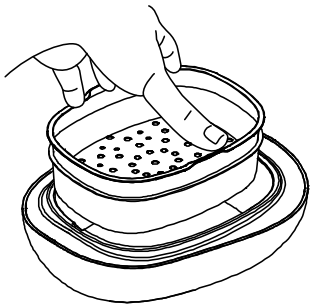
Steps of Assembly

Basic Components：clear ice compartment＋“White Ice” Compartment＋base

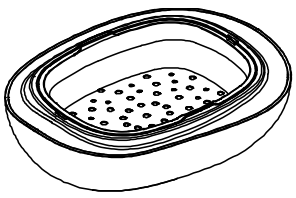


- Pour cool water into the “White Ice” compartment, filling it close to its brim.
- The quality of ice produced will vary depending on the water used. Tap water will still produce clear ice, but we suggest inhabitants of areas with undrinkable tap water to use boiled or mineral water instead.

- Place the clear ice compartment upon the “White Ice” compartment, and slowly begin pressing down. The water in the “white Ice” compartment will seep into the clear ice layer through small holes.
- Press down on clear ice compartment until it will go no further.
- Continue pouring water into the compartment until desired level. (The thickness of the ice can reach up to 4 cm)

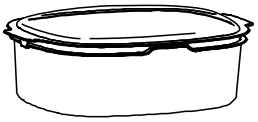


- Fixate ice compartments snugly in base.
- The water will be level with the sides of the base.

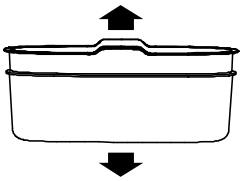


- Upon completion of assembly, place components in freezer.
- It will take 8-12 hours for the ice to freeze sufficiently.
- During the freezing process, please refrain from excessively opening the freezer door or jostling the icebox.

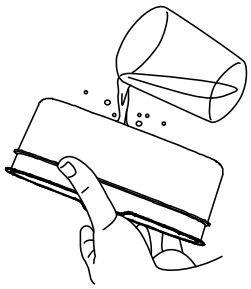
How to Extract the Ice



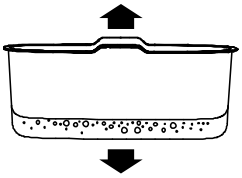
- When the water has frozen sufficiently, the edge of the ice will protrude 5mm about the edges of the container. (Please refer to the Conditions of Solidification.)



- Remove the ice components from the base.
- Prying upon the sides will dislodge the “white ice” compartment.

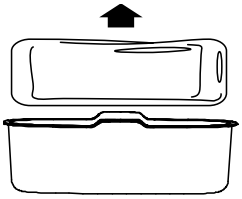


- If separation is difficult, please drizzle the base of the “white ice” compartment with water, or set aside for 1-3 minutes until it is possible to dislodge the ice.

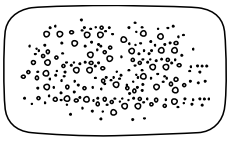


- Continue prying on the sides to dislodge the “white ice” mass from the compartment.
- The ice will be very stiff so if prying does not dislodge the ice mass, run it under water, which will help dislodge the “white ice” mass.

⚠ **Avoid direct and prolonged contact with the ice to prevent frostbite.**



- The clear ice in the upper compartment can be used directly in your beverages.



- The “white” ice in the lower compartment can be discarded, or used for chilling items in an icebox or icepacks.

Conditions of Solidification

There are two conditions of solidified ice that require special attention.

Completely Frozen :

be cautious of extremely low temperatures

- Sufficient freeze time of 8-12 hours.
- “White ice” layer will be raised prominently; center of ice mass will feel completely solid.

Incompletely Frozen :

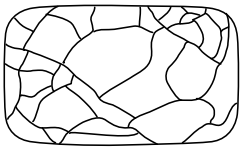
be cautious of sharp edges

- Insufficiently cold temperature, or less than 8 hours in the freezer.
- White ice” layer will be raised, but the center of the ice may remain liquid.
- Upon opening the compartments, you may find the bottom of the ice hollow, with sharp edges on the edges of the holes. Handle with caution.

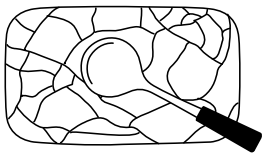
Multi-Purpose Usage

Cracked Ice

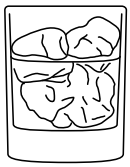
Assembly method：Basic components



- Flush the clear-ice with room-temperature water, and the difference in temperature will cause the ice to crack.



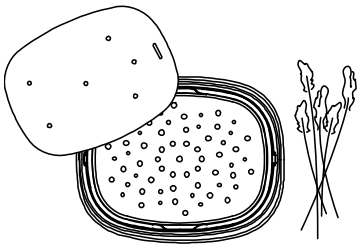
- Use the back of a spoon or another hard object to strike the ice.
- Light strikes will break ice into chunks of various sizes.



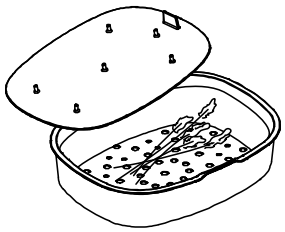
- Un-uniform ice chunks are perfect for use with beverages, especially whisky.

Decorative Ice

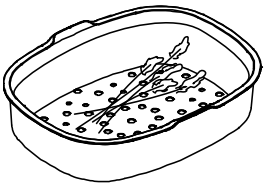
Assembly method：Basic components＋decorative object＋ decorative lid



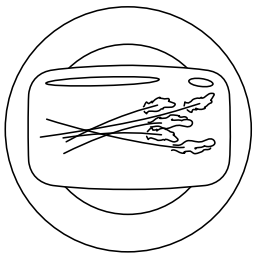
- Adding a decorative object such as flora, letters, or photographs before ice production will make decorative ice.
- To prevent decorations from floating to the top, the decorative lid must be place on top to keep the object(s) below water.



- After assembly, fill the tray with water, then place on the decorative ice layer slowly, at a slanted angle.
- The lid will stick to the surface of the water, keeping the decorative objects beneath the water.
- Allow the tray 8-12 hours to solidify in the freezer.



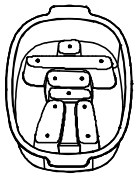
- If you have difficulty removing the decorative ice, avoid flushing with water as this will cause the ice to crack.
- Allow the ice to sit in room temperature for 1-3 minutes for easy removal.



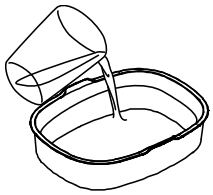
- Decorative ice can be used for plating or centerpiece purposes.
- For example, Japanese cuisine such as sashimi can be placed upon a decorative ice block to improve its freshness and appeal.

3D Sculpture Ice

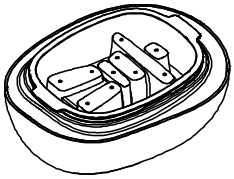
Assembly method：Basic components＋Sculpture compartment



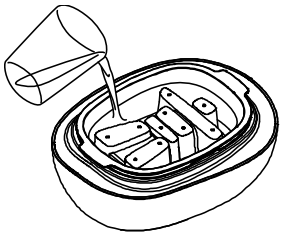
- The sculpture compartment can mould the clear ice to improve its versatility and enjoyment.



- Fill the “white ice” layer 2/3 with water.
- Place the clear ice compartment on top.

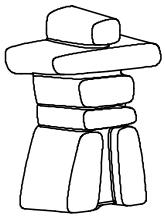


- Slowly press the sculpture down, the water will seep through the holes.
- When the sculpture compartment layer reaches the bottom, press down so slide flaps click firmly into place. Excess water will exit through vents.
- Place compartments in base and put into freezer.



- If you have difficulty removing the sculpture ice, avoid flushing with water as this will cause the ice sculpture to crack.
- Allow the ice to sit in room temperature for 1-3 minutes for easy removal.

- Avoid pouring water into holes as shown in diagram as this will affect the shape of the ice sculpture.

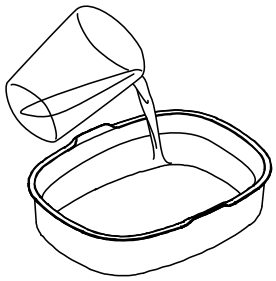


Introduction of ice sculpture:

- The inukshuk is a traditional sculptural form used by the Inuit, a tribe of people who inhabit the arctic circle of Canada.
- They are sculptures of welcome and friendship, and this is why they have also been chosen to be the official logo of the 2010 Winter Olympics held in Vancouver, BC.
- An inukshuk sculpture would make an ideal centerpiece to welcome guests into your own home for any event.

Rapid Ice Production

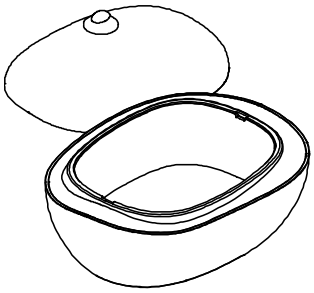
Method of Assembly：Only the “White ice” Compartment



- If you wish to make ice cubes in a short amount of time the “white ice” compartment will produce common ice cubes.
- Place directly in freeze for ice cubes in the shortened time of 2-4 hours.

Ice Bucket Function

Method of Assembly ：Cupule handle ＋ Top lid + Base



- Ready ice cubes can be placed in the base, and sealed with the top lid to use the ice bucket function.
- In room temperature, ice can be kept without melting for 2-3 hours.

Q&A

Difficulty with ice removal

The Polar Ice Tray set compartments are designed to fit airtight, to prevent the escape or spillage of air or water. Sometimes, due to the jostling of compartments after assembly, water may leak into other compartments. When this water freezes, ice removal may become difficult.

Solutions：

- Flush with water or set aside：Flush the outside of the ice box with water, or leave in room temperature for a few minutes. It will become easier to extract the ice once it has begun to defrost.
- While putting the compartments together, be careful as to not let water seep into the other compartments.

The inner walls of the ice tray are smooth, if it becomes cracked or scratched, ice removal may also become difficult.

Points of Caution:

- When cleansing the compartments, avoid using rough surfaces such as pads or the rough side of the sponge.
- Avoid dropping the tray, or hitting it upon hard surfaces to remove the ice.

Bubbles in the ice

Under Rapid Freezing Conditions: Air dissolved in the water the water will be moved towards the surface of the water due to the shape ice crystals. These bubbles are miniscule, with poor floating abilities, so some will adhere to the surface of the ice crystals. If the freezing time is quicker, these bubbles will be trapped inside the ice before they are able to exit on the surface. The clusters of bubbles will refract and bend light, causing the ice to appear “white” or opaque.

Under Slower Freezing Conditions: Before all the bubbles in the ice are trapped, the air bubbles may group together to form larger bubbles. Larger bubbles will be able to rise to the surface at a faster speed, therefore escaping the ice before they are trapped. While doing this, the bubbles may leave behind small exit trails in the ice.

Under Very Slow Freezing Conditions: If the freezing time is further increased, the air will not be in directly pressurized into bubbles during the course of freezing. The air is instead diffused in all four directions, with ample time to escape. Because there are no bubbles or “exit trails” in the ice, the ice will be crystal clear. If your freezer is set to a very low temperature, you may see needle like bubbles inside your ice. To solve this problem, simply lower your freezer settings to a slightly higher temperature.

If you find large bubbles inside your ice, it is most likely due to jostling or movement of the ice tray before solidification. Please avoid opening the freezer or moving the ice tray during the ice formation period.

Lengthy freeze time

It will generally take 8-12 for the ice cubes to freeze to their ideal form. The time will vary depending on the variations in freezers. In comparison to ordinary ice cubes, Polar Ice cubes take longer to solidify due to the following reasons:

- The ice cube is approximately 600c.c.，four times the ordinary150c.c. trays.
- Insulted base prevents ice from freezing from the lower layers.

If the ice has not solidified after 12 hours, this is most likely due to insufficiently low temperatures in your freezer, or too many items in the freezer.

Adjustments in freezer settings

Generally, a freezer set to -18°C has the optimum freezing temperature. This would be the “**middle**”setting of the spectrum.

Setting your freezer to “low” will cause for a longer freezing time, but it will improve the transparency of the ice cubes.

Setting your freezer to “high” on the other hand, may produce small, needle-like bubbles in the ice.

Manufacturer：	U-CUBE Creative Ltd.
Production：	Taiwan
Address:	1F., No.13, Alley 6, Lane 423, Zhuangjing Rd., Taipei City 110, Taiwan
TEL:	(02)-2720-8852
WEB:	www.polar-ice.com.tw
e-mail：	info@polar-ice.com.tw