

Sharp's TEKION Cold-retention Material

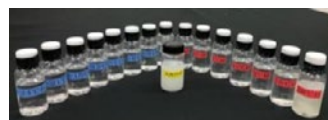
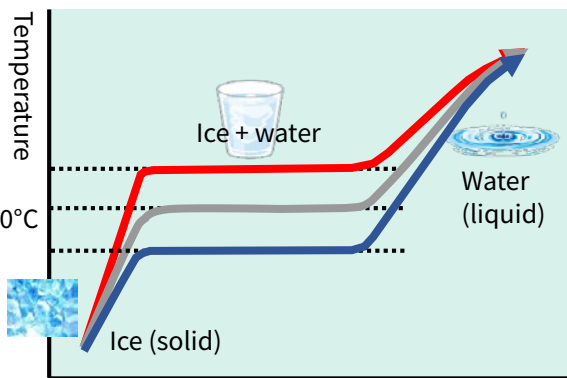
About Sharp's TEKION cold-retention material

Think of it as liquid crystals that don't solidify at a mid-winter ski resort, and that don't become liquid on a mid-summer beach.

(Liquid crystal: A phase between solid and liquid)



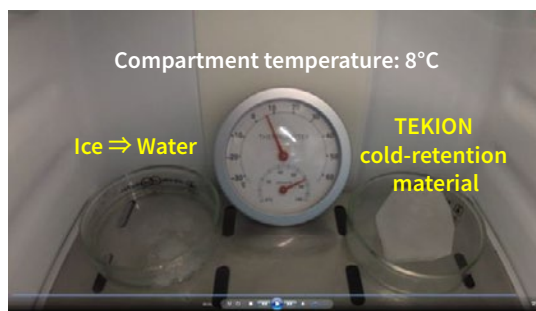
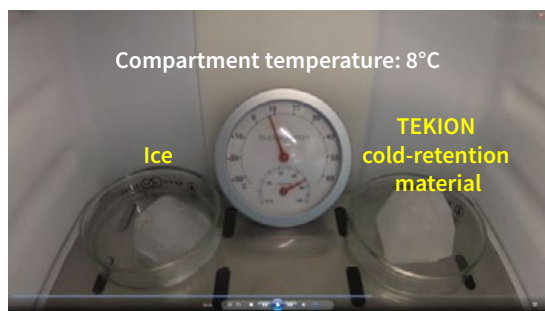
Cold-retention material: Ice that starts to melt at different temperatures



Sharp has developed more than 10 kinds, which melt at temperatures from -24°C to 28°C

Control the temperature at which the cold-retention material melts and freezes

TEKION cold-retention material that won't melt at up to 10°C



At a compartment temperature of 8°C, normal ice melts into water but 10°C TEKION cold-retention material remains in ice form.

TEKION cold-retention material that freezes at 5°C

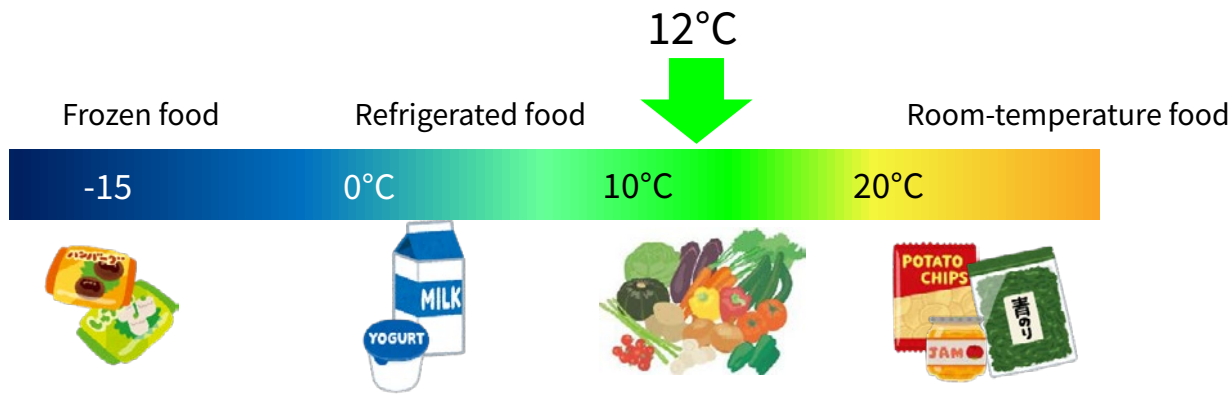


At a compartment temperature of 5°C, 10°C TEKION cold-retention material starts to freeze.

At a compartment temperature of 5°C, water undergoes no change, but TEKION cold-retention material freezes.

TEKION Cold-retention Material for Fresh Produce

About TEKION cold-retention material for fresh produce



At a melting temperature of 12°C, a temperature ideal for fresh produce is maintained.

Temperature ideal for fresh produce



Even if something directly touches 12°C TEKION cold-retention material, it stays at 12°C. An ideal temperature for produce is maintained.

Prevents low-temperature damage



If produce sensitive to low temperatures comes in contact with conventional cold-retention material for refrigerated food (melting point of approx. 0°C), it will experience low-temperature damage.

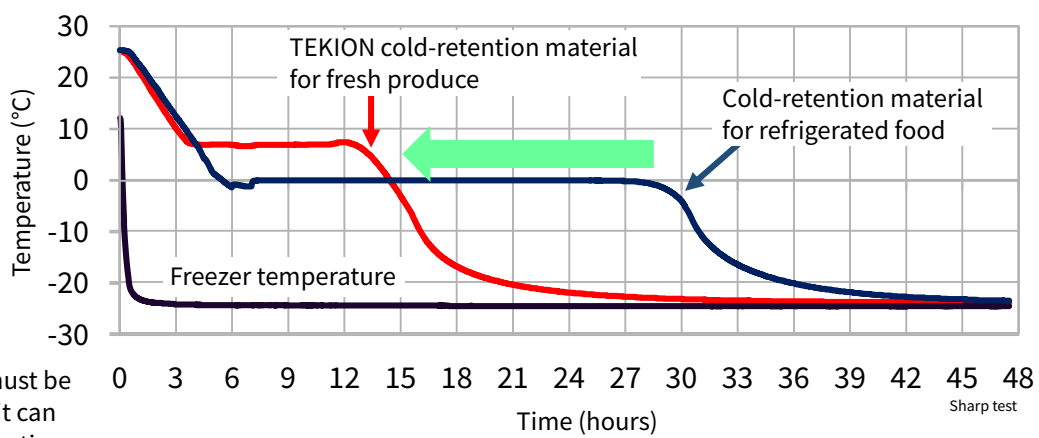
Example of low-temperature damage

Decrease in electricity needed for freezing



Freeze 18 units of cold-retention material in rack

Cold-retention material must be frozen in a freezer before it can be used. TEKION cold-retention material for fresh produce has a short freezing time and can therefore reduce electricity needed for freezers.



Shorter freezing time = Decreased electricity consumption