

## The Science Behind Heat Wave

Heat Wave Instant Reusable Heat Packs contain non-toxic sodium acetate, a salt-water solution that can generate heat up to 130 degrees (54C). This temperature can be reached in seconds as it transforms from a liquid to solid state. When the aluminum button of the activator is clicked, it creates a physical chain reaction causing the liquid to crystallize and generates heat. The heat is generated as the liquid converts to a solid.

This process is called an exothermic reaction. The sodium acetate inside the Heat Wave packs turns to solid ("freezes") at 130 degrees, but stays in a liquid form at room temperature. When the activator is clicked, the friction causes a few molecules to react, creating a chain reaction. The energy released in the process is therapeutic heat.

When you boil the heat pack in its solid state, the crystals melt and will eventually turn into a liquid pack. These processes can be repeated over 500 times for your continued use.