



Hydrogen-Free Ration Heater (HRH)



Soldiers, campers, commuters...all of them often eat on-the-go. Now a developmental item called the Hydrogen-Free Ration Heater (HRH) provides a safe, flameless way to heat their meals.

Why is it Needed?

The current ration heater contains magnesium and produces flammable hydrogen gas during use. A need exists to replace the current heater with one that does not produce hydrogen and can be safely transported, stored, used and disposed of.

Technology:

The new HRH is easy to operate: just add water to the fill line on the bag, approximately one ounce, and insert the packaged meal. The water activates anhydride powders to provide two sources of heat: first, from a chemical reaction called "hydration" (when the powders combine with the water); and second, from a chemical reaction called "neutralization" (which makes all the components non-reactive).

The heater is:

- **Fast...**The HRH can heat a ration from 40° F to 140° F in less than 15 minutes.
- **Safe...**The HRH is not classified as a hazardous material and does not produce flammable by-products.
- **Disposable...**The HRH is a single use item that is disposed of with regular household trash after use.

Benefits:

Safe and Environmentally Sound...

No flammable gas release; no residual water after use; no environmentally unfriendly residue; no restrictions on operational use, transport, storage or disposal.

Lightweight...The heater weighs approximately 50 grams and is packaged in a heat and moisture resistant easy-peel bag.

High Commercial Potential...Can be used to heat food or beverage, on-the-go, or in confined spaces. Heater has applications for commuters, hikers and outdoor enthusiasts.

Point of Contact:

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