



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

**JAN 08 2009**

Mr. Lawrence W. Bierlein  
Attorney at Law  
Suite 500  
1101 30<sup>th</sup> Street, NW  
Washington, DC 20007

Ref. No. 08-0277

Dear Mr. Bierlein:

This responds to your letter of October 21, 2008, regarding classification of a new water reactive formulation used in a flameless ration heater (FRH) under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). According to your letter, the FRH is a component of a Unitized Group Ration Express (UGR-E) used by military services to heat foodstuffs when activated by contact with water. You offer verification that your client tested the reformulated heating mixture in accordance with the UN Manual of Tests and Criteria, as required by § 173.124(c), and test results indicate the reformulated mixture does not produce flammable or toxic gas at a rate greater than one liter per kilogram, per hour, when in contact with water.

As you note in your letter, it is the primary responsibility of a person who offers a product into commerce to properly classify that material under the HMR. However, upon review of your letter and the accompanying test report, it is the opinion of this Office that the reformulated mixture does not meet the definition of Division 4.3 material and, therefore, is not subject to the HMR.

I trust this adequately responds to your request. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Mitchell'.

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards

LAWRENCE W. BIERLEIN

ATTORNEY AT LAW

Stevens  
§ 173.22  
Shipper's Responsibility

October 30, 2008

08-0217

Dr. Ted Willke  
Associate Administrator for  
Hazardous Materials Safety  
Pipeline & Hazardous Materials Safety Administration  
U.S. Department of Transportation  
Washington, DC 20590

**Attn: Office of Standards (PHH-10)**

**Re: Request for clarification of regulations;  
UGR-E classification**

Dear Dr. Willke:

A number of meals ready-to-eat (MRE) are authorized for transport by and for the Department of Defense. Many of these meals include a flameless ration heater consisting of a magnesium-iron alloy mixture containing sodium chloride. In the field, the deliberate application of water to the magnesium mixture provides enough heat to make these field rations edible. For many years, a single field unit has been recognized as not constituting a hazard in quantity and form sufficient to warrant regulation, but larger numbers of these units or larger units have been shipped under Class 4.3. This is because the magnesium generates sufficient flammable gas when tested with distilled water under the UN Manual of Tests and Criteria to meet the definition of Packing Group I or II in Class 4, Division 4.3. Several configurations of these products can serve multiple military personnel in the field. These larger packages commonly are called a Unitized Group Ration-Express (UGR-E).

My client has been successful in reformulating the heating compound of a UGR-E heater such that, when tested under the UN Manual, less than 1 liter of flammable gas is generated per hour, i.e., the gas generated is below the regulated range for a 4.3 material. A copy of those test results is attached.

While we understand that under Sec. 173.22, it is the shipper's obligation to properly classify a material, the Defense Department purchasers of such products would appreciate PHMSA concurrence in our conclusion that the reformulated product does not meet the definition of a 4.3 material. Nothing else in the package meets the definition of any other hazard classification. Although the modified heater no longer would be regulated, under military specifications the UGR-E would continue to be packaged to exceed ASTM transportation performance-oriented packaging tests.

We request your confirmation that these UGR-E products may be shipped as unregulated under the Hazardous Materials Regulations. Please let me know if you have any questions on this request for clarification. Thank you.

Sincerely,

Lawrence W. Bierlein