



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

SEP 11 2006

400 Seventh Street, S.W.
Washington, D.C. 20590

Ms. Lauren Oleksyk
Physical Scientist
Combat Feeding Directorate
Department of the Army
Kansas Street
Natick, MA 01760-5018

Reference No.: 06-0137

Dear Ms. Oleksyk:

This responds to your letter concerning transportation of a heater that is a component in a Unitized Group Ration – Express (UGR-E) under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). You ask how packages containing UGR-Es must be marked and labelled if they are determined to be subject to the HMR.

You describe the UGR-E as a self-contained, self-heating module that provides a complete meal for up to 18 personnel, with heaters and trays of food packaged together in an intermediate fiberboard box. A module has four heaters, each containing 85 grams of magnesium alloy powder, for a total of 340 grams per module. In the Type I version, the four heaters are hermetically sealed within a tri-laminate pouch and placed on top of the inner heating module case. In the Type II version, each hermetically sealed heater is placed in the bottom of the heating tray. The individual heaters are activated with a 300 mL solution of 1.5% salt in water which is dispensed from a pouch assembled within each heating tray. The outer packaging of each module is a fiberboard box with the completed package weighing approximately 42 pounds. During the 45-minute heating process, the four heaters generate approximately 11 cubic feet of hydrogen gas. Your correspondence included illustrations and assembly instructions for both types of UGR-E, as well as a Material Safety Data Sheet; you also provided a prototype of each module type sans heaters, and one Type I heater pouch containing four heaters.

Based on the information you provided, the most appropriate shipping description for the UGR-E is "Magnesium alloys, powder, 4.3, UN 1418, PG II." The HMR do not authorize any exceptions in column (8A) for this entry; therefore, the UGR-Es are fully regulated. When offered for transportation in commerce, in addition to meeting the specification packaging requirements in § 173.212, non-bulk packages must be marked as specified in § 172.301 (proper shipping name, identification number, etc.) and labeled with the DANGEROUS WHEN WET label in accordance with Subpart E of 49 CFR Part 172. For transportation by aircraft, packages prepared in accordance with the International Civil Aviation Organization's (ICAO) Technical Instructions must also be marked with the name and address of the shipper and consignee.



060137

171.2
172.301
172.101

You may wish to seek relief from some of the requirements detailed in the previous paragraph under the terms of a special permit by contacting the Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Special Permits and Approvals (OHMEA). Special permits are granted on a case-by-case basis. Procedures for applying for a special permit are set forth in 49 CFR 107.105. The OHMEA may be reached at (202) 366-4512.

I trust this satisfies your request.

Sincerely,

A handwritten signature in black ink that reads "Hattie L. Mitchell". The signature is written in a cursive style with a large initial "H" and a long, sweeping underline.

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



DEPARTMENT OF THE ARMY
 US ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
 NATICK SOLDIER CENTER
 KANSAS STREET
 NATICK MA 01760-5018

REPLY TO
 ATTENTION OF : AMSRD-NSC-CF-I

Corbin
 § 171.2
 § 172.101
 Applicability
 12 May 2006
 06-0137

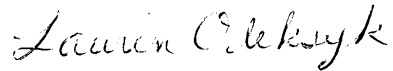
U.S. Department of Transportation
 Pipeline Hazardous Material Safety Administration
 Office of Hazardous Material Safety
 400 7th Street Southwest
 Washington, DC 20590

06 MAY 24 PM 5:14
 DOT/RSPA/CHMS
 PMT

1. Subject: Request for U.S. DOT Interpretation of Hazardous Materials Regulations (HMR) for Proposed Military Ration, Unitized Group Ration-Express.
2. References:
 - a. U.S. DOT letter, July 7, 1992: Flameless Ration Heater (FRH) for Meal, Ready-to-Eat considered not subject to Hazardous Materials Regulations (HMR). (Encl 1)
 - b. U.S. DOT-E 10897, October 26, 1992: Exemption of bulk packed FRHs from HMR marking and labeling. (Encl 2)
3. The U.S. Army Research, Development and Engineering Command, Natick Soldier Center (NSC) is requesting U.S. DOT interpretation of HMR in terms of a proposed self-heating military ration. The proposed ration – the Unitized Group Ration-Express (UGR-E) – is a self-heating meal that feeds 18 soldiers. It contains a magnesium and iron based, water-activated chemical heater that was previously considered by U.S. DOT to be non-regulated when packaged within the Meal, Ready-to-Eat (MRE) standard combat ration. However, the UGR-E heater is a larger heater, does not contain salt in the powder blend, and is packaged differently than the MRE heater (Encl 3), thus DOT interpretation is requested.
4. NSC is in the process of procuring 220 UGR-E rations for shipment to Iraq in May 2006. The UGR-Es for this shipment will be packaged in accordance with Type I configuration described in enclosure 3. In the future, it is expected that the majority of UGR-Es produced will be of the Type II configuration. Based on your interpretation of 49 CR 172.301 and 172.400 and previous decisions regarding the FRH, we request your opinion on whether or not UGR-E Type I and Type II packages are subject to HMR. If the UGR-E is found to be subject to HMR, please specify what HM markings and labels are required for both domestic and international shipment via ground or air.

AMSRD-NSC-CF-I

5. Questions or comments may be directed to Lauren Oleksyk, Tel: (508) 233-4555 or email lauren.oleksyk@natick.army.mil, or Peter Lavigne, Tel: (508) 233-4939 or email peter.lavigne@natick.army.mil. Thank you for your attention to the matter.



LAUREN OLEKSYK
Physical Scientist
Combat Feeding Directorate
Natick Soldier Center

Enclosures:

1. U.S. DOT letter, July 7, 1992
2. U.S. DOT-E 10897
3. Description of proposed Unitized Group Ration – Express (UGR-E), Type I and Type II.
4. Material Safety Data Sheet for UGR-E heater.