



U.S. Department of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

APR 10 2009

Mr. Ernest Cornwell
NASA Wallops Flight Facility
32400 Fulton Street, Building M-16 Room 107
Wallops Island, VA 23337

Ref. No.: 09-0022

Dear Mr. Cornwell:

This is in response to your letter dated January 23, 2009 requesting clarification of the Hazardous Material Regulations (HMR; 49 CFR Parts 171-180) applicable to the classification of explosives. In your letter you describe a parachute recovery system that uses reefing line cutters classed and approved by the Department of Transportation (DOT) as "Cutters, cable, explosive, 1.4S, UN0070." You ask if a reefing line cutter packed in the parachute recovery system may also be described as "Cutters, cable, explosive, UN0070, 1.4S."

The answer is no. A parachute recovery system with a previously approved reefing line cutter installed would be considered a new explosive under § 173.56 and must be classed by DOT. In accordance with § 173.56, a person requesting approval of a new explosive must submit to the Associate Administrator a report of the examination and assignment of a recommended shipping description, division, and compatibility group. If the Associate Administrator finds the approval request meets the regulatory criteria, the new explosive will be approved in writing and assigned an EX number. The Office of Hazardous Materials Approvals may be reached by telephone at (202) 366-4511.

I trust this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Drakeford, Carolyn <PHMSA>

From: INFOCNTR <PHMSA>
Sent: Tuesday, January 27, 2009 2:32 PM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: REQUEST FOR CLARIFICATION OF IDENTIFICATION AND PACKAGING OF UN0070 CUTTERS, CABLE, EXPLOSIVE, WITH WRITTEN REPLY

Leary
 §172.101
 §173.62
 Explosive
 09-0022

From: Cornwell Ernest [mailto:Cornwell_Ernest@nsroc.net]
Sent: Friday, January 23, 2009 2:23 PM
To: INFOCNTR <PHMSA>
Cc: Shreves Christopher
Subject: REQUEST FOR CLARIFICATION OF IDENTIFICATION AND PACKAGING OF UN0070 CUTTERS, CABLE, EXPLOSIVE, WITH WRITTEN REPLY

January 23, 2009

Completed via email by RB on 1/26 @ 12:47 pm

From: Mr. Ernest R. Cornwell, Logistics Program Analyst
 NASA Wallops Flight Facility
 32400 Fulton Street, Building M-16 Room 107
 Wallops Island, Virginia 23337

SUBJECT: UN0070 CUTTERS, CABLE, EXPLOSIVE, 1.4S, when packaged in a recovery system

NASA Wallops Flight Facility, Wallops Island, Virginia, uses parachute recovery systems for recovery of payloads. Normally these systems use reefing line cutters, identified through Department of Transportation as the subject UN ID 0070.

Each specific cutter is identified with EX number, Competent Authority Approval, as well as MSDS.

When transporting these systems, each of the cognizant authorities understands the shipment of 1.4S in approved UN Certified Containers.

When containers are purchased, it is specified that the material to be packaged will be explosive, 1.4 series (the containers will also be used to ship explosive 1.4 material in a host of UN identified numbers (i.e. UN0323, UN0276, UN0173, etc.).

The regulations and requirements for packaging this material identifies the hazardous material to be packaged. The assembly is incidental. For Example:

1. DOMESTIC. U.S. Department of Transportation, provides identification, packaging, and shipment as follows, for UN0070 Cutters, Cable, Explosive, 1.4S, PGII (retrieved online 01/23/2009 from: http://edocket.access.gpo.gov/cfr_2003/octqtr/49cfr173.62.htm)

49CFR173.62, *SPECIFIC PACKAGING REQUIREMENTS FOR EXPLOSIVES*, PI 134: Inner packagings (11 varieties) including plastic bags. Intermediate packagings not required. The outer packaging (13 varieties) includes 4C1, 4C2 Wooden Packages, and 4G Fiberboard packages.

1/29/2009

49CFR173.61(a), *MIXED PACKAGING REQUIREMENTS*,

(http://edocket.access.gpo.gov/cfr_2003/octqtr/49cfr173.61.htm) states “An explosive may not be packed in the same outside packaging with any other material that could, under normal conditions of transportation, adversely affect the explosive or its packaging unless packaged by DOD or DOE in accordance with Sec. 173.7(a).”

The parachute recovery system is engineered such that the explosive article is surrounded by sufficient cushioning material (parachute fabric), and enclosed in static plastic, to absorb shock and to prevent function of the device during 4G (Gravity Pressure) Rocket Launches. Therefore, the explosive or its packing cannot be adversely affected under normal conditions of transportation.

2. COMMERCIAL AIR. International Air Transportation Association (IATA), in the 50th edition *Dangerous Goods Regulations*, provides identification, packaging, and shipment as follows, for UN0070 Cutters, Cable, Explosive, 1.4S:

Table 4.2 (pg180)

- UN/ID No., Proper shipping name, Class, as listed above.
- Pax/Cargo Packaging Instruction 134, Maximum Net Qty/Pkg 25 Kilograms
- Cargo Aircraft Only Packaging Instruction 134, Maximum Net Qty/Pkg 100 Kilograms

In the identification paragraph, 4.1.6.8 *Column H*, the “maximum net quantity (weight or volume) of the article or substance allowed in each package for transport on a passenger or cargo aircraft. The weight quoted is the net weight...”

Packaging Instruction 134 (pg 345), subject to State and Operator Variations, provides specific packaging instructions for the cutters. Inner Packagings are described, including Plastic or Paper Bags. Intermediate Packaging is not required. Combination Packagings are allowed and identified, and, most importantly, Outer packaging is described with specific Certification Identifiers, including: 4C1, 4C2 Wooden Packages, and 4G Fiberboard packages.

Question: Does the UN family of **UN0070 Cutters, Cable, Explosive, 1.4S**, when in packaged and protected in certified parachute recovery systems, can be identified, packaged, marked, labeled, documented, and transported as UN0070.

Ernest R. Cornwell