



United States Department of the Interior



BUREAU OF MINES
Pittsburgh Research Center
Cochrans Mill Road
Post Office Box 18070
Pittsburgh, Pennsylvania 15236-0070

June 10, 1993

Mr. David W. Boston
President
Owen Compliance Services, Inc.
8717-A Forum Way
Fort Worth, Texas 76140

Dear Mr. Boston::

Enclosed is our "Recommendation for Classification by Analogy" for your DTC-APRV-015 Detonating Cord, Explosive 1.4D. To receive your classification, you must forward this recommendation to the Approvals Branch, DHM 32, Office of Hazardous Material, Department of Transportation, Washington, DC 20590, telephone (202) 366-4514.

If you have any questions, please call me at (412) 892-6636.

Sincerely,

T. S. Bajpayee
Supvy. Physical Scientist, EXP

Enclosure





INDIVIDUAL COMPANY DATA PROPRIETARY
United States Department of the Interior



BUREAU OF MINES
Pittsburgh Research Center
Cochrans Mill Road
Post Office Box 18070
Pittsburgh, Pennsylvania 15236-0070

Date: June 10, 1993
Report No. A-8191

RECOMMENDATION FOR CLASSIFICATION BY ANALOGY

Manufacturer Owen Compliance Services, Inc.

Product Type Detonating Cord

Designation of Item for which Classification is Requested DTC-APRV-015
Detonating Cord, Explosive 1.4D

Descriptive Material May 19, 1993 letter with attachments from
Mr. David W. Boston

Designation of Classified Item to which Analogy is Alleged DTC-APRV-015
Detonating Cord, Explosive 1.4D Reference No. EX-9207009, U.S. BOM
Report T-7753

Components	Classified Item	New Item	Difference Favorable for Analogy
RDX, HMX, HNS, PYX, or PETN	25 to 80 grains/linear foot	25 to 87 grains/linear foot	yes

Comments: The new item will increase the maximum core load of the DTC-APRV-015 Detonating Cord, Explosive 1.4D, from 80 gr/ft. to 87 gr/ft. The maximum length per package is 500 ft as stated in the U.S. BOM Report T-7753.

Recommended DOT Classification

- Recommended Classification Class C explosive
- Recommended Shipping Description Cord, detonating
- Packaging, marking, and labeling requirement for surface transportation (rail and highway) may be found in the following Sections of 49 CFR:
 - Packaging - Section 173.104
 - Marking - Section 173.104(c)
 - Labeling - Section 172.411, Explosive C label

Recommended UN Classification

- Proper shipping name Cord, detonating
- Hazard class 1.4D

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-2-

Report No. A-8191

- c. Identification number UN 0289
- d. Packaging group II
- e. Label Explosive 1.4D
- f. Special provisions None
- g. Packaging authorization 173.62
 - 1. Packaging E-124
 - 2. Particular packaging exception/requirement 33
 - 3. Marking 172.301, Cord, detonating UN 0289

Recommended by

T. S. Bajpayee

T. S. Bajpayee
Supvy. Physical Scientist, EXP





8717-A Forum Way • Fort Worth, TX 76140 • Tel: (817)551-0660 • Fax: (817)551-1032 or (817)551-1411

June 10, 1993

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Mrs. Carol Monroe
U.S. DEPARTMENT OF TRANSPORTATION
RSPA/OHMEA/Approvals Branch DHM-32
400 Seventh Street, SW
Washington, DC 20590-0001

Dear Mrs. Monroe:

This letter is submitted on behalf of the OCS client Owen Oil Tools, Inc.

Notification to DOT: Per 49 CFR 173.56(a)(2), notification is provided that client has increased the authorized net explosive weight for EX-9207009 (*DTC-APRV-015 Owen Oil Tools, Inc. Detonating Cord Family, Explosive 1.4D*) from 80 grains per linear foot to 87 grains per linear foot. This action has been reviewed by the U.S. Bureau of Mines and their report A-8191 in support of this modification is enclosed.

DOT Action Requested: Acceptance/approval of this modification and update of DOT's records pertaining to EX-9207009 to note the change in n.e.w. FROM 80 to 87 grains per foot.

Notifications to Client: All notifications, inquiries, documents and responses to client should be addressed as follows:

Owen Oil Tools, Inc.
c/o Owen Compliance Services, Inc.
8717-A Forum Way
Fort Worth, TX 76140

Telephone and FAX communication to client may be made to 817-551-0660 (telephone) or 817-551-1032 (FAX). All correspondence should be addressed to the attention of David W. Boston.

Since this notification is made under 49 CFR 173.56(a)(2), we believe that no acknowledgment on the part of DOT is required. Absent a dissenting opinion from DOT/RSPA, OCS will advise its client that it may commence shipments of 87 grain detonating cord under EX-9207009 effective June 15, 1993.

Sincerely,

David W. Boston
President

cc: 0100.015



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

0100.015R2

Centers for Disease Control
and Prevention (CDC)
National Institute for Occupational
Safety and Health
Pittsburgh Research Center
P.O. Box 18070
Pittsburgh, PA 15236-0070

June 3, 1997

Mr. David W. Boston
President
Owen Compliance Services, Inc.
8717-A Forum Way
Fort Worth, Texas 76140

Dear Mr. Boston:

I have reviewed your letter dated April 23, 1997, relative to the product designated as "DTC-APRV-015 Detonating Cord, Explosive 1.4D," and understood that Owen Oil Tools, Inc., intends to extend the lower limit of explosive loading.

Pursuant to 49 CFR 173.56(a)(2), it is concluded, that the above referenced modification would not create any significant difference in hazard characteristics from the explosive previously approved (reference DOT EX-9207009; USBM T-7753). However, the packaging method referenced in USBM Report No. T-7753 must be strictly enforced.

If you have any questions or need further information, please do not hesitate to contact me.

Sincerely

T. S. Bajpayee

T. S. Bajpayee
Mining Engineer
Fires, Explosions and Explosives



United States Department of the Interior



BUREAU OF MINES
Pittsburgh Research Center
Cochrans Mill Road
Post Office Box 18070
Pittsburgh, Pennsylvania 15236-0070

July 7, 1992

Mr. David W. Boston
Director of Regulatory Affairs
Corporate Secretary
Owen Oil Tools, Inc.
8900 Forum Way
Fort Worth, Texas 76140

Dear Mr. Boston:

Enclosed is our recommendation for classification for your DTC-APRV-015 Detonating Cord, Explosive 1.4D. You must now forward this recommendation to the Approvals Branch, DHM 32, Office of Hazardous Material, Department of Transportation, Washington, DC 20590, telephone (202) 366-4514, to receive your classification.

If you have any questions, please call Richard L. Sobeck at (412) 892-6420 or me at (412) 892-6622.

Sincerely,


Richard J. Mainiero
Research Supervisor, Explosives

Enclosure



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United States Department of the Interior



BUREAU OF MINES
Pittsburgh Research Center
Cochrans Mill Road
Post Office Box 18070
Pittsburgh, Pennsylvania 15236-0070

Date: July 7, 1992
Report No.: T-7753

RECOMMENDATION FOR CLASSIFICATION

1. Shipper Owen Oil Tools, Inc.
2. Product Type Detonating Cord
3. Designation of Item for which Classification is Requested DTC-APRV-015
Detonating Cord, Explosive 1.4D
4. Descriptive Material April 21, 1992 letter from Mr. David W. Boston
with attachments
- a. This recommendation is for a family of Detonating Cords. Owen Oil Tools, Inc. purchases previously examined and approved detonating cords and repackages them for resale and shipment. The minimum/maximum explosive parameters for these cords are shown below.

Explosive	Cord Loading	Maximum length per package
RDX, HMX, HNS, PYX, or PETN	25 to 80 grains/linear foot	500 feet

- b. Owen Oil Tools, Inc. packages these Detonating Cords using the method shown in Owen drawing DTC-APRV-015 (attachment 2). This packaging method was tested as described in the attached BOE Laboratory Report B90469, and was found to be completely successful in interrupting the progress of accidental or intentional initiation of detonating cord within a package (attachment 1).

In that external fire testing of detonating cord in Owens patented packaging method had not been documented, a UN 6C test was conducted. The results of the tests are given below.

5. Results of Test
- a. External Fire (Bonfire)

Three packages, each containing 500 ft. of 80 grains/linear foot RDX detonating cord having a total volume of 0.55 cubic meters were placed on a steel stand. Fifteen gallons of liquid fuel were poured into a receptacle beneath the steel stand and ignited using black powder and electric matches.

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-2-

Report No. T-7753

After being exposed to flames for approximately 3 minutes, the packages began burning.

After an additional period of approximately 5 minutes, the styrofoam mounting boards began burning which was evident by large volumes of black smoke, and approximately 5 minutes later the detonating cord began burning which was evident by a mild hissing sound, which continued for approximately 15 minutes. The three packages and their contents were completely consumed during a total burn time of 34 minutes.

There was no indentation of any one of the three witness screens, no projections, and no thermal or blast effects.

Conclusion:

Based on the testing done by the Bureau of Explosives (BOE lab report B90469) and the results of the UN 6C test documented above, we feel that this family of detonating cord may be safely shipped as 1.4. Additionally, we recommend that consideration be given to granting one (1) EX number for this family of detonating cord.

6. Recommended DOT Classification
 - a. Recommended Classification Class C explosive
 - b. Recommended Shipping Description Cord, detonating
 - c. Packaging, marking, and labeling requirements for surface transportation (rail and highway) may be found in the following Sections of 49 CFR:
 1. Packaging - Section 173.104
 2. Marking - Section 173.104(c)
 3. Labeling - Section 172.411, Explosive C label
7. Recommended UN Classification
 - a. Proper shipping name Cord, detonating
 - b. Hazard class 1.4D
 - c. Identification number UN 0289
 - d. Packaging group II
 - e. Label Explosive 1.4D
 - f. Special Provisions None
 - g. Packaging authorization 173.62

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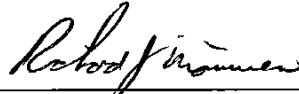
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-3-

Report No. T-7753

1. Packaging E-124
2. Particular packaging exception/requirement 33
3. Marking 172.301 Cord, detonating UN 0289

Recommended by



Richard J. Mainiero
Research Supervisor, Explosives

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