



**DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590**

6439

**[49 CFR Parts 172, 173, 174, 177,
178]**

[Docket No. HM-46; Notice 70-7]

**TRANSPORTATION OF HAZARDOUS
MATERIALS**

Reclassification of Fusees

The Hazardous Materials Regulations Board is considering amending the Department's Hazardous Materials Regulations to reclassify railway fusees and highway fusees as flammable solids.

Presently the regulations classify railway and highway fusees as class C explosives. The Bureau of Explosives of the Association of American Railroads, pursuant to requests from manufacturers of these types of fusees, has performed detonation and fire tests on regular 15-minute highway fusees. There was no evidence of any explosion in either test. In a wood-kerosene bonfire the fusees were consumed in about 6 minutes after the burning was well started without evidence of any explosion. Based upon these test results the Bureau has recommended that the regulations be amended to change the classification of railway and highway fusees from class C explosives to flammable solid.

It is the Board's opinion that the petition has merit. Class C explosives in general are certain types of manufactured articles that contain class A or class B explosives, or both, as components, in restricted quantities, and certain types of fireworks. Railway and highway fusees are devices designed to produce visible effects for signal purposes. Historically they have been placed in the explosive category and at one time were in the fireworks group. When a distinction was made between special fireworks (class B explosives) and common fireworks (class C explosives) over 15 years ago, the fusees were relegated to the category of common fireworks. Subsequently, fusees were withdrawn from the fireworks category but were retained in the class C explosives classification.

For the purposes of transportation, an explosive is defined as any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion, i.e., with substantially instantaneous release of gas and heat, unless such compound, mixture, or device is otherwise specifically classified in the regulations.

A fusee is designed to function by rapid combustion instead of by explosion. Although it may contain small quantities of explosives it appears appropriate to reconsider its classification in light of its current design, function, use, and real hazard. In view thereof and based on the test data submitted in support of the petition, it appears that a regulatory change is warranted.

In conjunction with the reclassification, the petitioner also requested that shipments of fusees be exempted from the labeling and placarding requirements. The Board's general view on labeling packages and placarding transport vehicles are reflected in Notice No. 68-5 (Docket No. HM-7). The petitioner's request in this matter is not consistent with the Board's projected goals in these areas and therefore has not been included in this proposed rule making.

Additionally, it is proposed to insert the name, "signal flares" in § 173.100(y) which has been inadvertently omitted for many years.

In consideration of the foregoing, 49 CFR Parts 172, 173, 174, 177, and 178 would be amended as follows:

I. Part 172 would be amended, as follows:

A. Section 172.5 paragraph (a) Commodity List would be amended as follows:

§ 172.5 List of explosives and other dangerous articles.

(a) * * *

Article	Classed as—	Exemptions and packing (see sec.)	Label required if not exempt	Maximum quantity in one outside container by rail express
(Cancel)				
Highway fusees.....	Expl. C.....	No exemption, 173.108.....		200 pounds.
Railway fusees.....	Expl. C.....	No exemption, 173.108.....		200 pounds.
(Add)				
Fusees.....	F.S.....	No exemption, 173.154a.....	Yellow.....	200 pounds.
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§ 173.154a Fusees.

(a) A fusee is a device designed to burn at a controlled rate and to produce visible effects for signaling purposes. It consists of a pasteboard or fiber tube containing a colored flare mixture and with or without a means of support. The composition of the fusee must be such that spontaneous ignition does not occur when the moistened composition is exposed to a temperature of 212° F. for 72 consecutive hours. Fusees must have individual tip, head, or similar ignition point or surface entirely covered and securely protected against accidental contact or friction. Fusees must be securely packed in packages complying with the following specifications:

(1) Specification 15A, 15B, 15C, 16A, 19A, or 19B (§§ 178.168, 178.169, 178.170, 178.185, 178.190, 178.191 of this chapter). Wooden boxes. Gross weight not to exceed 150 pounds for specification 19B boxes; 200 pounds for the other boxes. When specification 15C boxes are used, devices must be packed in air-tight inside metal receptacles.

(2) Specification 12B (§ 178.205 of this chapter). Fiberboard boxes. Boxes must have reinforced ends proven to be capable of preventing penetration of spikes through the outside box when a sample package, prepared as for shipment, is subjected to two drops from a height of 4 feet onto a solid surface. The package must be dropped so as to strike diagonally with the spikes in a downward position. Gross weight not to exceed 65 pounds except that gross weight not to exceed 75 pounds is authorized in boxes made in accordance with § 178.205-24 of this chapter.

(3) Specification 29 (§ 178.226 of this chapter). Mailing tubes, provided the penetration of the spikes of the fusees through the outside container is prevented by the method specified for fiberboard boxes, specification 12B, in subparagraph (2) of this paragraph. Gross weight not to exceed 5 pounds.

(4) Fusees without spikes when offered for shipment may be packed in packages prescribed in this paragraph, omitting the protection required for these devices when equipped with spikes.

(5) Fusees may be packed with non-explosive or nonflammable articles provided the outside packages are marked as prescribed in this section.

(b) Each outside package must be plainly marked in letters not less than seven-sixteenths inch in height "Fusees" and with the additional words "Handle Carefully—Keep Fire Away."

III. Part 174 would be amended as follows:

A. In Part 174 Table of Contents § 174.538 would be amended to read as follows:

Sec. 174.538 Loading and storage chart of hazardous materials.

B. In § 174.538 the heading would be amended; in paragraph (a) item 9 of the loading and storage chart would be amended in both the vertical and horizontal columns to read as follows:

§ 174.538 Loading and storage chart of hazardous materials.

(a) * * *

Item 9—Fireworks, common.

* * *

II. Part 173 would be amended as follows:

A. In Part 173 Table of Contents § 173.108 would be amended; § 173.154a would be added to read as follows:

Sec. 173.108 Common fireworks, signal flares, hand signal devices, smoke signals, smoke candles, smoke grenades, smoke pots, and Very signal cartridges.

173.154a Fusees.

B. In § 173.100 paragraph (y) would be amended to read as follows:

§ 173.100 Definition of Class C explosives.

* * *

(y) Smoke candles, smoke pots, smoke grenades, smoke signals, signal flares, hand signal devices, and Very signal cartridges are devices designed to produce visible effects for signal purposes. These devices must contain no bursting charges and no more than 200 grams of pyrotechnic composition each (see Note 1), exclusive of smoke composition (see Note 2), unless greater weight of composition is approved by the Bureau of Explosives.

[No change in Notes 1 and 2.]

* * *

C. In § 173.108 the heading, the introductory text of paragraph (a), and paragraph (a)(5) would be amended; paragraph (a)(6) would be added; paragraph (b) would be canceled; paragraph (d) would be amended to read as follows:

§ 173.108 Common fireworks, signal flares, hand signal devices, smoke signals, smoke candles, smoke grenades, smoke pots, and Very signal cartridges.

(a) Class C explosives covered by this section must, unless otherwise specifically provided for, be securely packed in packages complying with the following specifications:

* * *

(5) Fireworks, such as sparklers, with match tip or head, or similar ignition point or surface, must have each individual tip, head, or similar ignition point or surface entirely covered and securely protected against accidental contact or friction.

(6) Signal flares may be packed with nonexplosive or nonflammable articles provided the outside packages are marked as prescribed in this section.

(b) [Canceled].

* * *

(d) Each outside package must be plainly marked in letters not less than seven-sixteenth inch in height "Common Fireworks," "Signal Flares," "Hand Signal Devices," "Smoke Signals," "Smoke Candles," "Smoke Pots," "Smoke Grenades," or "Very Signal Cartridges", as appropriate, and with the additional words "Handle Carefully—Keep Fire Away."

D. Section 173.154a would be added to read as follows:

IV. Part 177 would be amended as follows:

A. In Part 177 Table of Contents § 177.848 would be amended to read as follows:

Sec. 177.848 Loading and storage chart of hazardous materials.

B. In § 177.848 the heading would be amended; in paragraph (a) item 9 of the loading and storage chart would be amended in both the vertical and horizontal columns to read as follows:

§ 177.848 Loading and storage chart of hazardous materials.

(a) * * *

Item 9—Fireworks, common.

* * *

V. Part 178 would be amended as follows:

A. In § 178.205-24 the heading and paragraph (a) would be amended to read as follows:

§ 178.205 Specification 12B; fiberboard boxes.

§ 178.205-24 Special box; authorized only for fusees.

(a) Must comply with this specification except that the box must be constructed of double faced corrugated fiberboard at least 400-pound test or solid fiberboard of same strength. Lining and pads are not required. Authorized gross weight is 75 pounds. For fusees equipped with spikes, box-end protection as required in § 173.154a(a)(2) of this chapter must be provided.

Interested persons are invited to give their views on this proposal. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, D.C. 20590. Communications received on or before June 10, 1970, will be considered before final action is taken on the proposal. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

This proposal is made under the authority of sections 831-835 of title 18, United States Code, section 9 of the Department of Transportation Act (49 U.S.C. 1657), and title VI and section 902(h) of the Federal Aviation Act of 1958 (49 U.S.C. 1421-1430 and 1472(h)).

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direction of Commandant,
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