DEPARTM

Pipeline and Hazardous Materials Safety Administration

[Docket Number PHMSA–2019–0156 (Notice No. 2022–07)]

Hazardous Materials: Safety Device Classification Policy

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

ACTION: Notice; safety device classification policy.

SUMMARY: PHMSA is publishing this notice setting forth and requesting comments from the public and other interested parties regarding its policy on classification of articles containing hazardous materials used in vehicles, vessels, or aircraft to enhance safety to persons. These articles are described as "Safety devices, *electrically initiated, 9*" for purposes of transportation under the U.S. hazardous material regulations.

DATES: Comments must be received by [30 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments identified by the docket number PHMSA-2019-0156 by any of the following methods:

- *Federal e-Rulemaking Portal:* http://www.regulations.gov. Follow the online instructions for submitting comments.
- *Fax:* (202) 493-2251.
- *Mail:* Docket Management System, U.S. Department of Transportation, Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, Ground Floor, Room W12-140 in the West Building, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number PHMSA-2019-0156 for this notice at the beginning of the comment. Note that all comments received will be posted without change to http://www.regulations.gov including any personal information provided. If sent by mail, comments must be submitted in duplicate. Persons wishing to receive confirmation of receipt of their comments must include a self-addressed stamped postcard.

Docket: For access to the dockets to read background documents or comments received, go to http://www.regulations.gov or DOT's Docket Operations Office; see **ADDRESSES**.

Confidential Business Information: Confidential Business Information (CBI) is commercial or financial information that is both customarily and treated as private by its owner. Under the Freedom of Information Act (FOIA; 5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPRIETARY." Submissions containing CBI should be sent to Lad Falat, Sciences and Engineering Division, Office of Hazardous Materials Safety, (202) 366-1655, PHMSA, East Building, PHH10, 1200 New Jersey Avenue, SE, Washington, D.C. 20590-0001. Any commentary that PHMSA receives, which is not specifically designated as CBI, will be placed in the public docket.

FOR FURTHER INFORMATION CONTACT:

Lad Falat, Sciences and Engineering Division, (202) 366-1655, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION:

I. Executive Summary

PHMSA publishes and seeks comments on this Safety Device Classification Policy (Policy). This Policy outlines the parameters for what PHMSA will approve as Class 9 (UN3268) safety devices under 49 CFR 173.166(b)(1)(iv). Specifically, PHMSA will approve as Class 9 (UN3268) safety devices articles that are complete, assembled components used in transportation by vehicle, vessel, or aircraft and which perform a stand-alone mechanical action enhancing safety to persons. As explained below, because subcomponents of safety devices do not meet the threshold and because they pose a potential risk when transported, they must continue to be transported under existing regulatory authorities. This notice also provides guidance on the types of data and documentation an applicant can provide to support an application to the Associate Administrator for Hazardous Materials Safety for classification of an article as a Class 9 (UN3268) safety device.

II. Background

PHMSA's Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) prescribe requirements for the transportation in commerce of safety devices, including labeling, marking,

and shipping paper requirements. The HMR provides that articles containing Class 1 (Explosive) materials must seek classification approval from PHMSA and adhere to important labeling, marking, and shipping paper requirements. The HMR also establishes requirements for assignment of shipping descriptions that incorporate information regarding the classification of materials as Class 1, Class 9, or another hazard class.

Section 173.166 of the HMR defines "safety devices" as "articles which contain pyrotechnic substances or hazardous materials of other classes and are used in vehicles, vessels or aircraft to enhance safety to persons." That section identifies three types of proven safety devices (specifically, air bag inflators, air bag modules, and seat-belt pretensioners) that, if certified by a PHMSA-certified explosives testing laboratory as Class 9 materials, do not require PHMSA approval for use of the shipping description "UN3268, Safety devices, *electrically initiated,* 9." Section 173.166, however, contemplates that certain other articles could be eligible for approval by the Associate Administrator for Hazardous Materials Safety for use of the "UN3268, Safety devices, *electrically initiated,* 9" shipping description. Articles determined by a PHMSA-certified explosives testing laboratory to have passed the testing criteria established in Special Provision 160 and which are used in vehicles, vessels, or aircraft to enhance the safety of persons, may be submitted to the Associate Administrator for Hazardous Materials Safety for approval as a Class 9 (UN3268) safety device. Other safety devices, which had been deemed ineligible for approval as Class 9 hazardous materials by either the terms of § 173.166, or the Associate Administrator for Hazardous Materials Safety, may apply for approval to use the shipping description "UN0503, Safety devices, pyrotechnic, 1.4G." Division 1.4G explosives are subject to enhanced labeling, marking, and shipping paper requirements that notify transportation workers, emergency responders, and import controllers of the presence of explosives. In

addition, division 1.4G explosives are not allowed for bulk transportation, or transport by passenger rail or passenger aircraft.

The above-described § 173.166 construct reflects a 2015 amendment of the HMR[2] to account for a change in the 19th Edition of the United Nations Model Regulations[3] expanding eligibility for use of the "UN3268, Safety devices, *electrically initiated*, 9" shipping description to other proven technologies. Historically, the shipping description for UN3268 safety devices in the UN Model Regulations ("UN3268, Safety devices, *air bag inflators, air bag modules, or seat-belt pretensioners*") had been explicitly limited to the specific safety devices identified in italics. The HMR at § 173.166 had mirrored that limitation. However, the 19th Edition of the UN Model Regulations deleted the historical reference to specific safety devices within a revised shipping description—"UN3268, Safety devices, *electrically initiated,* 9"—to accommodate technological development of new safety devices for vehicles, vessels, and aircraft. PHMSA subsequently revised § 173.166 in its HM-215M rulemaking to incorporate that revised shipping description within UN Model Regulations and introduced the approval process by which stakeholders can seek to use the shipping description "UN3268, Safety devices, *electrically initiated,* 9."

Since issuance of HM-215M, PHMSA has received special permit applications to classify Class 1 articles, that had been classified through an EX approval as Division 1.4S explosives and which are not used in vehicle, vessel, or aircraft transportation, as Class 9 (UN3268) safety devices. UN3268 is limited by the HMR for use in transportation, therefore, safety-enhancing articles containing pyrotechnic substances or other hazardous materials that are not used in a

[2] "Final Rule: International Standards Harmonization (HM-215M)," 80 FR 1075 (Jan. 8, 2015) (HM-215M).
[3] United Nations Economic Commission for Europe, UN Recommendations on the Transport of Dangerous Goods – Model Regulations, Nineteenth revised edition (2015) (19th Edition of the UN Model Regulations).

vehicle, vessel, or aircraft, such as those for table saws, non-vehicular mining equipment, and life-saving appliances as described in § 173.219 cannot be considered "UN3268, Safety Devices, *electrically initiated,* 9." PHMSA has also received inquiries and requests for interpretations concerning whether subcomponents of vehicle, vessel, or aircraft safety devices could themselves be eligible for use of the shipping description "UN3268, Safety devices, *electrically initiated,* 9."

In response to those inquiries about implementation of § 173.166, PHMSA in June 2020 issued a request for information[4] seeking public input on specific questions and issues relevant to the shipping description "UN3268, Safety devices, *electrically initiated*, 9." These questions sought general information and data on the scope and expansion of the safety device application under § 173.166, the testing required for consideration and approval as a Class 9 (UN3268) safety device, and the conditions for transport and carriage aboard aircraft for items classified as Class 9 (UN3268) safety devices under § 173.166. PHMSA received 14 total comments from various stakeholders including safety device manufacturers, explosive testing labs, and trade associations. The input received from these commenters has been considered in formulating this Policy.

PHMSA publishes this Policy set forth below and seeks comments from the public and interested stakeholders thereon.

III. Policy on Classification of Articles Used in Vehicles, Vessels, or Aircraft as Class 9 (UN3268) Safety Devices

[4] 85 FR 35368 (June 8, 2020).

In order to provide clarity on what types of articles PHMSA will consider for shipping description "UN3268, Safety devices, *electrically initiated,* 9" under 49 CFR 173.166, PHMSA issues this Policy and guidance. This document outlines the types of safety devices PHMSA will consider for approval as Class 9 (UN3268) safety devices, the process to seek such approval, and documentation to support such an application for approval.

Limitation to transportation sector

Section 173.166 limits applicability of the shipping description "UN3268 Safety devices, *electrically initiated, 9*" to "articles which . . . are used in vehicles, vessels, or aircraft to enhance safety to persons." The phrase "used in vehicles, vessels, or aircraft" limits eligibility to articles used in transportation by vehicle, vessel, or aircraft. Therefore, if an article is intended to enhance safety to persons, but is not used in a vehicle, vessel, or aircraft, it cannot be considered an eligible device under § 173.166 at this time.

Subcomponents

PHMSA has received inquiries on whether sub-components of safety devices can themselves be considered Class 9 (UN3268) safety devices under § 173.166. Shipping description "UN3268, Safety devices, *electrically initiated*, 9" is applicable to air bag inflators, air bag modules, seat-belt pretensioners, and other pyromechanical devices. Section 173.166 describes pyromechanical safety devices as "assembled components" and elsewhere describes some safety devices as being within "completed components."[5] In determining under § 173.166 if an article (other than air bag

[5] Section 173.166(d)(1) excepts from the requirements of § 173.166 a safety device classified as Class 9 and which is installed in, or is, a completed component of a vehicle, vessel, aircraft. As for what is considered a "completed component" the regulation mentions "steering columns or door panels" as examples, which provides further evidence of the limitations intended in § 173.166.

inflators, air bag modules, or seat-belt pretensioners) can appropriately be described as a Class 9 (UN3268) safety device, PHMSA will consider whether a sub-component to a safety device will have elevated risk over the safety device they will become a part of, which could be due to greater concentration or total amount of explosive hazard. PHMSA will balance the potential safety benefits to persons in vehicles, vessels, or aircraft with the potential danger posed by shipping explosive materials that are not incorporated in a larger component device. Many sub-components such as pyrotechnic micro-gas generators (MGGs), that supply a burst of gas but which itself does not produce a stand-alone safety-enhancing mechanical action, are not expected to meet these criteria—due to the safety burden they pose in shipment. To date, PHMSA has not received requests to approve any subcomponents that would enhance safety to persons in vehicles, vessels, or aircraft sufficient to outweigh the risks presented by transporting those subcomponents as Class 9 (UN3268) safety devices in transportation. This guidance supersedes PHMSA Letters of Interpretation 18-0035 and 18-0113, which are hereby withdrawn. PHMSA has not issued any approvals consistent with those Letters of Interpretation.

Guidance for applications for approval as Class 9 (UN3268) safety devices

Applicants seeking approval as Class 9 (UN3268) safety devices other than air bag inflators, air bag modules, and seat-belt pretensioners may apply for such approval pursuant to § 173.166(b). Any such articles must be examined and successfully tested by a person or agency who is authorized to perform examination and testing of explosives under § 173.56(b)(1) and submitted to the Associate Administrator for Hazardous Materials Safety for approval and assigned an EX number (see § 173.166(b)(1)(iv)).

In order for PHMSA to assign shipping description "UN3268, Safety devices, *electrically initiated,* 9" to an article, an applicant must provide, as part of the approval application, sufficient evidence that the article under consideration has been tested, including records of such tests as outlined in § 173.166(g)(1). Additionally, applicants may provide information that the article is used in vehicles, vessels, or aircraft, and demonstrated to enhance safety to persons. Data on the number of articles in use listed by vehicle type and the resulting effects on enhancement of safety to persons is important supporting information for an application under § 173.166(b)(1)(iv). Additional supporting documentation may include written statements confirming the use of the subject articles to enhance safety to persons by manufacturers or modifiers of vehicles, vessels, or aircraft, and statements of recognition from the insurance industry, other trade associations, and/or government bodies that the subject articles are recognized to enhance the safety to persons when used in vehicles, vessels, or aircraft. This may include data that demonstrates the devices have been used in foreign vehicle, vessels, or aircraft applications to enhance safety to persons. Applicants' claims and supporting documentation will be reviewed and verified by the Associate Administrator during the evaluation and approval process.

An article seeking the shipping description "UN3268, Safety devices, *electrically initiated*, 9," but that has not been tested and demonstrated to enhance safety to persons when used in vehicles, vessels, or aircraft, would not meet the Associate Administrator's policy for shipping description "UN3268, Safety devices, *electrically initiated*, 9." In such a case, if the article meets the definition of "explosive"[6], the applicant must seek approval under § 173.56 to transport the

[6] As defined in § 173.50 an *explosive* means any substance or article, including a device, which is designed to function by explosion (*i.e.,* an extremely rapid release of gas and heat) or which, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion, unless the substance or article

article in accordance with the procedures for the classification and approval of a new Class 1 explosive. If, after such approval is granted, the applicant can demonstrate that the article is used in vehicles, vessels, or aircraft to enhance safety to persons, then they may request that PHMSA apply shipping description "UN3268, Safety devices, *electrically initiated*, 9" in accordance with the process described above.

Signed in Washington, DC on October 6, 2022 under authority delegated in 49 CFR 1.97.

William S. Schoonover,
Associate Administrator for Hazardous Materials Safety,
Pipeline and Hazardous Materials Safety Administration.

is otherwise classed under the provisions of the HMR. The term includes a pyrotechnic substance or article, unless the substance or article is otherwise classed under the provisions of the HMR.

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