



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

August 5, 2020

Rex Railsback  
HazMat Specialist  
Railsback Safety Professionals LLC  
312 Lawrence Avenue  
Lawrence, KS 66049

Reference No. 20-0044

Dear Mr. Railsback:

This letter is in response to your May 28, 2020, email and follow-up phone call requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the classification of an engine containing a fuel with a flash point over 100 °F. Specifically, you reference a previous letter of interpretation issued by this office (Letter of Interpretation Ref. No. 20-0034), and request that PHMSA reconsider our position that an engine that contains a liquid fuel with a flash point of 125 °F should be classified and described as “UN3528, Engine, internal combustion, flammable liquid powered, 3” for transportation.

Additionally, you ask how a shipper should classify an internal combustion engine that contains fuel with a flash point of 142 °F. You correctly note that a liquid with a flash point of 142 °F is not a flammable liquid by definition in the HMR, i.e. a liquid with this flash point meets the definition of a combustible liquid (see § 173.120(b)). You suggest that the classification and description “UN3528, Engine, internal combustion, flammable liquid powered, 3” is incorrect for engines containing a flammable liquid fuel re-classed as a combustible liquid (e.g., flash point of 125 °F), and for engines with a fuel that meets only the definition of combustible liquid (e.g., flash point of 142 °F), because the proper shipping name (PSN) for UN3528 contains the words “flammable liquid.”

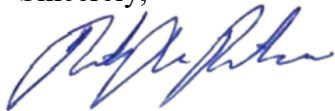
The entry “UN3528, Engine, internal combustion, flammable liquid powered, 3” was added to the § 172.101 Hazardous Materials Table (HMT) in the HM-215N final rule (82 FR 15796, March 30, 2017). This entry replaced an existing entry for internal combustion engines, “UN3166, Engines, internal combustion, *flammable liquid powered, 9.*” This amendment to the HMR was intended to align the HMR with international transportation requirements, and more clearly communicate the flammability hazard associated with the fuel inside the internal combustion engine. International regulations for the transportation of hazardous materials do not include a “combustible liquid” hazard classification. Therefore, the UN3528 entry added to the HMR by HM-215N only references “flammable liquid” as an additional description for the entry. However, use of UN3528 is not limited to only engines containing flammable liquids while

excluding combustible liquids. Engines containing either flammable or combustible liquids are eligible for the exceptions provided for internal combustion engines in §§ 173.220 and 176.906.

The most appropriate HMT entry for an internal combustion engine powered by a flammable or combustible liquid is UN3528 even though the PSN includes the terms flammable liquid. In accordance with § 172.101(d)(4), shippers are instructed to modify the hazard class “3” to read “Combustible liquid” when that material is reclassified in accordance with § 173.150(e) or (f) of the HMR or has a flash point above 60 °C (140 °F) but below 93 °C (200 °F). However, § 172.101(d)(4) does not authorize modification of the PSN. Please note that because of the many exceptions provided to UN3528, internal combustion engines containing a flammable or combustible liquid are rarely subject to the HMR’s shipping paper requirements. However, in the event that an internal combustion engine containing a combustible liquid is transported with an HMR-compliant shipping paper, the shipping description would read “UN3528, Engine, internal combustion, flammable liquid powered, Combustible liquid” instead of “UN3528, Engine, internal combustion, flammable liquid powered, 3.” Additionally, please note that the HMR authorizes changes to the PSN with the approval of the Associate Administrator in accordance § 172.101(l)(2); therefore, a shipper may request a modification of the PSN for UN3528 to read “combustible liquid powered,” if the shipper believes it is necessary.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Dirk Der Kinderen', is written over a light blue horizontal line.

Dirk Der Kinderen  
Chief, Standards Development Branch  
Standards and Rulemaking Division

**From:** [INFOCNTR \(PHMSA\)](#)  
**To:** [Hazmat Interps](#)  
**Subject:** FW: Reference No. 20-0034, Letter of Clarification  
**Date:** Wednesday, June 3, 2020 12:38:11 PM

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Hello Alice and Ikeya,

Below is a request for Letter of Interpretation. Please assign to Eamonn.

Thanks,

Jonathon, HMIC

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**From:** Rex Railsback [mailto:[rex@hazmatgeek.com](mailto:rex@hazmatgeek.com)]  
**Sent:** Thursday, May 28, 2020 3:40 PM  
**To:** INFOCNTR (PHMSA) <[INFOCNTR.INFOCNTR@dot.gov](mailto:INFOCNTR.INFOCNTR@dot.gov)>  
**Subject:** Reference No. 20-0034, Letter of Clarification

Reference No. 20-0034, Letter of Clarification, A1 to Q1.

Thank you for your timely response to my questions. Unfortunately, your response seems to suggest a violation of the HMR.

By your response, I understand that an engine, internal combustion, combustible liquid powered, meets the definition of a hazardous material, per 171.8, but your statement that the entry of UN3528 "Engine, internal combustion, flammable liquid powered, 3" is also for an engine, internal combustion, combustible liquid powered, does not seem to fit within the regulations.

If as you state in your answer to Q1, that an internal combustion engine, combustible liquid powered, meets the hazmat table entry for UN3528 "Engine, internal combustion, flammable liquid powered, 3", how does said entry apply without being in violation of the HMR. Per 173.120(b), I've named and classified my product as an "engine, internal combustion, combustible liquid powered" NOT "...flammable liquid powered".

Since 172.101(c) & 172.202(a)(2) states that the ONLY place I can obtain a proper shipping name is from Column 2 of the HMT and since the entry for UN3528 is for an engine, internal combustion, flammable liquid powered and not combustible liquid powered, use of said entry per your letter of clarification, would appear to be in violation of the HMR. 171.2(b) says "each person who offers... must comply with all ...requirements of this subchapter". 173.120(b) is the section that defines "combustible liquid" and if I classify a product as a "combustible liquid", then it IS NOT a "flammable liquid". 173.120(b)(2), says I can reclass a flammable liquid to a combustible liquid, if the flash point is 100 deg. F or higher. Since this section says "reclassified", this implies that flammable and combustible liquids are two different hazard classes. Additionally, 172.101(d)(4) states that "Each reference to a Class 3 material is modified to read "Combustible liquid" when that material is reclassified in accordance with §173.150(e) or (f) of this subchapter or has a flash point above 60 °C (140 °F) but below 93 °C (200 °F)." So at least two regulations imply that flammable and combustible

liquids are not one and the same and are two different hazard classes.

With the above information, please advised what would be the correct proper shipping name, hazard class, UN ID # and PG to use for a product that is properly classed, per 173.120(b), as required and allowed by the HMR, as “engine, internal combustion, combustible liquid powered” Since my original question used a flash point of 125 deg. F, would any of your answers change if the combustible liquid used to power my internal combustion engine, had a flash point of 142 deg. F.

I am requesting that your answers to this additional question, ref. No. 20-0034, be in writing.

My phone number is 913-568-3001

My address is 312 Lawrence Ave, Lawrence, KS 66049

Respectfully

Rex Railsback, HazMat Specialist

913-568-3001

[rex@hazmatgeek.com](mailto:rex@hazmatgeek.com)

[www.hazmatgeek.com](http://www.hazmatgeek.com)



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