



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

NOV 13 2003

Mr. Ned T. Stetson
Senior Research Scientist
Texaco Ovonic Hydrogen Systems, L. L. C.
2983 Waterview
Rochester Hills, MI 48309

Ref. No.: 03-0274

Dear Mr. Stetson:

This is in reference to your October 27, 2003 letter requesting a clarification of the requirements for transporting hydrogen absorbed in metal hydrides. Specifically, you asked whether the material may be offered for transportation as "Compressed gas, flammable, n.o.s. (hydrogen, metal hydride), 2.1, UN 1954", as stated in two clarification letters (Reference Nos. 00-0335 and 01-0055), or as "Hydrogen absorbed in metal hydride, NA 9279", as stated in two DOT exemptions.

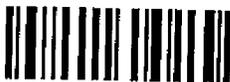
The material must be offered for transportation under the terms of a DOT exemption. In an October 2, 2001 letter (copy enclosed), we retracted our two earlier letters because of the potentially unsafe condition posed by a packaging containing hydrogen absorbed in metal hydrides, without adequate safety measures. To eliminate further confusion, we have requested that the two earlier clarification letters be removed from the Internet.

I hope this satisfies your request. Should you have further questions, please contact this office.

Sincerely,

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Material Standards

Enclosure



030274

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773.3 a(b)



Texaco Ovonic Hydrogen Systems, L.L.C.
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Mr. Edward Mazzullo, Director
Office of Hazardous Materials Standards
DHM-10
U.S. Department of Transportation
400 7th St. SW
Washington, DC 20590

RE: Transport of hydrogen absorbed in metal hydrides.

Dear Mr. Mazzullo:

I am writing to request a clarification regarding the transportation of hydrogen absorbed in metal hydrides.

The Office of Hazardous Materials Exemptions and Approvals has issued at least two exemptions (E 12650 granted to Ballard Power Systems and E 13036 granted to Symmetricom) for transporting hydrogen absorbed in metal hydrides. In both exemptions identification number NA9279 has been used along with a proper shipping name of "Hydrogen absorbed in metal hydride". Additionally the only hazard class/division assigned in each is 2.1, with no subsidiary hazard.

In the 13th edition of the U.N. Transport of Dangerous Goods - Model Regulations, the dangerous goods list includes a listing for UN 3468, "Hydrogen in a metal hydride storage system" with a hazard class of 2.1, again with no subsidiary hazard. The listing includes packaging instruction P099: "Only packaging approved by the competent authority may be used".

Your office has previously issued two letters of interpretations regarding the transport of hydrogen absorbed in metal hydrides: 00-0335 and 01-0055. In these two letters it is stated that hydrogen absorbed in metal hydrides could be considered as a mixture of two hazards. It is also stated that following the priority listing for multiple hazards found in 49 CFR §173.2a, the highest applicable hazard class would be the Division 2.1 (flammable gas). The appropriate classification and description would therefore be "Compressed gas, flammable, n.o.s., (hydrogen, metal hydride), 2.1, UN 1954". Any subsidiary hazard due to the solid may be included, but not required.

The question for which I am seeking clarification is, based on interpretations 00-0335 and 01-0055, as long as the packaging meets all of the regulated requirements for the transport of compressed hydrogen gas, Division 2.1, am I able to transport systems where the hydrogen is absorbed in metal hydrides without a specific exemption?

Thank you for your attention and prompt reply.

Sincerely,

Ned T. Stetson
Senior Research Scientist

Mitchell

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§ 173.301 (d)

Proper Shipping Name

27 October 2003

03-0274