



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

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

MAR 6 2001

Mr. Mark E. Porter
Ulmer & Berne
1300 East Ninth St., Suite 900
Cleveland, OH 44114

Ref. No. 00-0313

Dear Mr. Porter:

This is in response to your letter requesting confirmation that your client's crystalline silicon powder is not subject to the Hazardous Material Regulations (HMR; 49 CFR Parts 171-180). You enclosed a test report and a material safety data sheet to support that the material is not considered to be a flammable solid.

Based on the information you provided, we concur that your client's material is not subject to the HMR. Under § 173.22, it is the shipper's responsibility to properly classify a hazardous material. If a material does not meet the hazard class criteria in Part 173 and is not a hazardous substance, hazardous waste or marine pollutant, then it is not subject to the HMR. The test results of materials that are determined not to be subject to the HMR are not required to be verified by the Department of Transportation.

I hope this information is helpful. Please contact us if you have additional questions.

Sincerely,

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



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173.22

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November 7, 2000

McIntyre
§ 172.10117
Classification
Proper Shipping Name
Cleveland
Columbus
Cincinnati
Shipper's Responsibility
CO-0313

Mr. Ed Mazzullo
Director, Office of Hazardous Material
Standards (DHM-10)
U.S. Department of Transportation
400 7th St. S.W.
Washington, D.C. 20590

Dear Mr. Mazzullo:

This is a request for an opinion letter regarding the proper classification of crystalline silicon powder. We have a client who produces this material for sale to industrial concerns. The material does not meet the U.N. Recommendations on the Transport of Dangerous Goods, Test N.1: Test Method for Readily Combustible Solids. A copy of the test report is included as Exhibit A. Furthermore, the industry standard Material Safety Data Sheet ("MSDS") for this product shows that it should not be considered a hazardous material. The MSDS is attached as Exhibit B.

However, 49 C.F.R. §172.101, which contains a chart listing a number of hazardous materials and the transportation requirements for each, might be interpreted to include our client's product. Listed therein is a substance known as "Silicon Powder, Amorphous," with attendant labeling, packaging and quantity requirements. There is no definition of "amorphous," as opposed to crystalline, silicon anywhere in this section.

We have noted, however, that "amorphous" materials are defined in other C.F.R. sections. Specifically, in 29 C.F.R. §1926.1101, Appendix K, "The atoms in amorphous materials are randomly arranged with no long range order. An example of an amorphous material is glass." *Id.* at ¶ 4.2.

The atoms in crystalline materials, on the other hand, "[a]re in regular arrays and have long range order. Most of the atoms can be found in highly predictable locations." *Id.* These definitions also appear in 29 C.F.R. §1910.1001, App. J. ¶ 1.2, 4.2; 29 C.F.R. §1915.1001, App. K. ¶ 1.2; 16 C.F.R. §303.7. Our client's position is that its product fits the definition of a crystalline material and is therefore not hazardous under the Regulations.

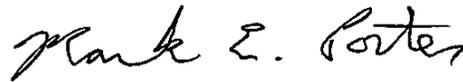
ULMER & BERNE LLP

Mr. Ed Mazullo
November 7, 2000
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The question presented for your determination is this: In view of the chemical difference between the two substances, does the Department of Transportation regard crystalline silicon powder as a non-hazardous substance exempt from the restrictions imposed on amorphous silicon powder?

We hope that you will be able to provide us with a timely response to this inquiry. Your consideration is greatly appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Mark E. Porter".

Mark E. Porter

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