



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

AUG 4 1999

Ms. Adrienne B. Scheurman  
Applied Specialties Inc.  
33555 Pin Oak Parkway  
Avon Lake, OH 44012

Ref. No. 99-0160

Dear Ms. Scheurman:

This is in response to your letter dated June 7, 1999, regarding the proper classification of your ammonium hydroxide solution under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, as stated in your letter, your material meets the definition of a corrosive material in Packing Group II, under §§ 173.136 and 173.137.

Under § 173.22, it is the shipper's responsibility to properly classify a hazardous material. Such determinations are not required to be verified by this Office. However, based on your analysis that the material would meet the definition of a corrosive material in Packing Group II, you are correct in your determination that "Ammonia solutions, 8, UN 2672, PG III" is not an appropriate proper shipping name. Section 172.101(c)(12)(i) states that a material shall be described by an appropriate proper shipping name listed in association with the correct hazard class, packing group, hazard zone, or subsidiary hazard for the material. If your material meets the defining criteria of a packing group II, corrosive material, you must describe your material using a proper shipping name that is associated with the correct hazard class and packaging group such as "Corrosive liquid, basic, inorganic n.o.s."

I hope this satisfies your request.

Sincerely,



John A. Gale

Transportation Regulations Specialist  
Office of Hazardous Materials Standards



990160

173.22



APPLIED SPECIALTIES INC.

Phone Number 440/933-9442

Fax Number 440/933-9439

BDH  
§ 173.22  
99-0160

Mr. Edward T. Mazzullo  
Director of the Office of Hazardous Material Standards  
US DOT  
Flash RSPA (DHM-10)  
400 7<sup>th</sup> St. SW  
Washington, DC 20590-0001

June 7, 1999

Letter of Interpretation

Dear Mr. Mazzullo;

Any assistance or direction in helping us properly classify an Aqueous Ammonia Solution for shipment would be appreciated.

The current Hazardous Material Table (CFR 49 172.101) indicates that "Ammonia solutions, relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia" are classified as a Hazard Class 8, packaging group III, Corrosive. The table does not address solutions less than 10%.

Our product contains demineralized water and 1.26% Ammonium Hydroxide by weight. The results of a Corrositex test indicated a breakthrough time of 26 minutes that according to this testing procedure would classify it as a corrosive packaging group II. A repeat test indicated the same values. A sample was sent to InVitro International, the manufacturer of Corrositex. Their report, see attached copy, indicates the same results.

Due to a change in the packaging group, it is our understanding that we cannot call this an ammonia solution. A chemist at DOT with whom we spoke recommended that we call it "Corrosive liquid, basic, inorganic, n.o.s., (contains Ammonium Hydroxide)". A review of information from various suppliers of dilute ammonia solutions indicate they use a DOT classifications ranging from "Non-regulated" to "Corrosive, Packaging Group III". Based on the chemistry of ammonia, we do not understand how a dilute solution can carry a more stringent packaging classification than more concentrated solutions. Can you provide an interpretation of the correct way that DOT would want this product classified?

Should you require any other information or specifications on the product, please do not hesitate to contact me @ 440-933-9442. Your assistance in helping us properly identify this product for shipment would be very much appreciated.

Respectfully,

  
A.B. Scheurman  
Compliance Manager

cc. H. Garcia Chemist  
R. Yimmer InVitro International

