



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

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

APR 22 2003

Ms. Dawn M. Abbaticchio
Hazardous Materials Specialist
Hamburg-Sued, Aliamca
and Crowley
465 South Street
Morristown, NJ 07960

Ref. No.: 02-0223

Dear Ms. Abbaticchio:

This responds to your inquiry regarding the requirements for segregation and forbidden materials and packages under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), as they apply to Class 8 (Corrosive) acids and "Potassium hydroxide solution" loaded on the same transport vehicle or freight container. We apologize for the delay in responding and hope it has not caused any inconvenience.

You stated that the product contains "Potassium hydroxide, diluted to 1-5% concentration, and this concentration does not react dangerously or violently with acids when tested. This product is sold to customers for the purpose of mixing the contents together for film processing, and no dangerous results have been exhibited. You asked if this material is forbidden in accordance 49 CFR 173.21(e), and whether Class 8 (Corrosive) acids and your Potassium hydroxide solution may be loaded on the same transport vehicle or freight container. You also asked if a Competent Authority Approval is required for shipment by vessel of your product to the U.S.

A material described as "Potassium hydroxide solution, 8, UN 1814, III" may be loaded together with acids on the same transport vehicle or freight container, provided they are not forbidden in accordance with § 173.21(e). Such determination is based on whether or not the mixing of a material in the same packaging, freight container, or overpack with another material is likely to cause a dangerous evolution of heat, or flammable or poisonous gases or vapors, or to produce corrosive materials. Based on the information provided that the mixing of the contents does not react violently and no adverse reaction occurs, the Potassium hydroxide, diluted to 1-5% concentration, identified in your letter is not a forbidden material under 49 CFR 173.21.

Under the HMR, the segregation requirements for transportation by highway specify that a hazardous material may not be loaded, transported, or stored together except as provided in 49 CFR 177.848(d). In addition, cyanides or cyanide mixtures may not be loaded or stored with acids if a mixture of the materials would generate hydrogen cyanide (See 49 CFR 177.848(c)). Therefore, if your product containing the Potassium hydroxide is not forbidden as specified in § 173.21(e), it may be loaded or stored together with acids during transportation.



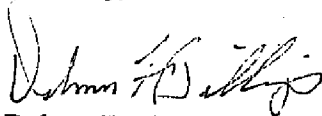
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173.21

In accordance with the International Maritime Dangerous Goods (IMDG) Code, the stowage and segregation provisions in column (16) of the Dangerous Goods List for Potassium hydroxide solution, UN 1814, specify segregation of "Away From" acids". For segregation within cargo transport units, sub-section 7.2.2.3 provides the following: Dangerous goods which have to be segregated from each other shall not be transported in the same cargo transport unit with the exception of dangerous goods which shall be segregated "Away From" each other which may be transported in the same cargo transport unit with the approval of the competent authority. In such cases, an equivalent standard of safety shall be maintained." As indicated earlier, you have provided information that the mixing of the contents does not result in a violent or adverse reaction. Accordingly, it appears that a competent authority approval can be issued to allow transport of the dilute potassium hydroxide solution and the acid in the same cargo transport unit.

I hope this information is helpful. If we can be of further assistance, please contact us.

Sincerely,



Delmer F. Billings
Chief, Standards Development
Office of Hazardous Materials Standards

Billings, Delmer

From: O'Berry, Donna
Sent: Tuesday, August 27, 2002 3:51 PM
To: Billings, Delmer
Subject: FW: Segregation question

Importance: High

Engrum
§ 173.21 (e)
Segregation
02-0223

Please handle as a request for a clarification letter. Thank you.

Donna

-----Original Message-----

From: Abbaticchio, Dawn [mailto:dabbatic@us.hamburg-sued.com]
Sent: Thursday, August 22, 2002 11:29 AM
To: donna.o'berry@rspa.dot.gov
Subject: Segregation question
Importance: High

We realize that there is no specific segregation required by IMDG/49CFR, however based on the properties and observations in column 17 of IMDG and based on section 171.21e we do not allow Class 8 Acids and Class 8 bases to load in the same container. We have received the below from the customer - they have not applied for a Competent Authority Approval because they do not believe one is required - I agree with them based on the information they have provided with regard to the tests they have performed and the way the cargo is utilized. Can you please offer an opinion 1- is this acceptable in the same cntr? 2- is Competent Authority Approval required? 3- Can a Carrier obtain CA Approval since the Shipper does not believe it is required based on below information provided? Your assistance is greatly appreciated.

Best Regards,
Dawn M. Abbaticchio
Hazardous Materials Specialist
HSAC Logistics, Inc.
email: dabbatic@us.hamburg-sued.com
ph: 973-775-5300
pg: 973-606-0429
fx: 973-775-5318

"We are aware that Column 17 of Part 3, Chapter 3.2, of the IMDG Code states that Potassium Hydroxide Solution, UN 1814, III, "reacts violently with acids" and also reacts with some other materials as well. However, this product (CAT. 857-8734) is sold to customers for the purpose of mixing the contents together for film processing. Mixing the contents does not result in any dangerous results. Kodak extensively tests its products not only ensure compliance with regulatory requirements, but moreso, to ensure the safety of the public and our customers.

Let me clarify by offering that the Potassium Hydroxide is diluted to 1-5% concentration, and the UN 3265, packing group III material, has a concentration of 5-10%. The low 1-5% concentration of Potassium Hydroxide did not react violently with other acids when tested.

We hope that this explanation reassures you of the safety of our shipment, that it meets compliance requirements, and this matter can be resolved."