



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

MAY 8 2002

Dr. Arnel D. Potter
490 S Waukegan Rd
Lake Forest, IL 60045

Ref. No. 02-0037

Dear Dr. Potter:

This is in response to your January 31, 2002 letter requesting clarification on the correct proper shipping name for your material as specified in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if the proper shipping name for your material should be "Oxidizing solid, corrosive, n.o.s." or "Toxic solids, oxidizing, n.o.s."

Under § 173.22, it is the shipper's responsibility to properly class and describe their material in accordance with parts 172 and 173 of the HMR. This Office does not perform that function. A material not specifically listed in the § 172.101 Hazardous Materials Table (§ 172.101 HMT) and meets the definition for Division 5.1, PG II and Class 8, PG III must be described as "Oxidizing solid, corrosive, n.o.s., 5.1, 8, UN3085, II." If the material is not specifically listed in the § 172.101 HMT and meets the definition for Class 6.1, PG I for dermal toxicity and Division 5.1 PG II or III then the material must be described as "Toxic solids, oxidizing, n.o.s., 6.1, 5.1, UN3086, I."

I hope this satisfies your request.

Sincerely,



John A. Gale
Transportation Regulations Specialist
Office of Hazardous Materials Standards



020037

172.101

Phone:
FAX:
email:

BAH
3172-101
Proper Shipping
Name

02-0037

Thursday, January 31, 2002

Mr. Edward Mazzullo
Director Office of Hazardous Material Standards
DA M-10
Agency
Research and Special gressive Administration
400 7th Street S.W.
Washington D.C. 20590-0001

Subject: Correct name for Chromic Acid ,solid mixtures

Foe Chromic acid solid :

The correct name is Chromic Acid ,solid. The hazard class is 5.1. PG is II . Label codes are 5.1.8.

For a solid mixture containing 50-80 % chromic acid according to the tables and discussions with Mr. Arthur Pollack, Charles Betts and Ailene , the correct name for the Chromic acid mixture would be :

Oxidizing solid,corrosive ,n.o.s. ,UN 3085, II, 5.1.8.(contains Chromic Acid ,solid)

A client is insisting that chromic acid mixtures according to DOT should be shipped as toxic solids with a UN 3086 number. This is given for Toxic solids,oxidizing,n.o.s., 6.1 ,UN3086, I ,6.1.5.1

As pure Chromic acid has a PG of II in the tables , has the DOT determined that chromic acid mixtures are more toxic than diluted chromic acid in solid form ?

Any help in the proper name for chromic acid solid mixtures would be greatly appreciated in writing and in as short of time that you would be able to help on this subject.

Sincerely,

Arnel D. Potter
Fax 847-234-1380

Mr. Cameron

DOT

As per our discussion today in reference to Chromic Acid ,solid mixtures:

Chromic acid, solid Hazard Class is 5.1, UN1463,PG II, Label codes 5.1,8

A chromic acid solid mixture if the oxidizer and corrosive properties are not greatly reduced would be:
Oxidizing solid, corrosive, n.o.s. Hazard class 5.1 ,UN3085 , PG II, Label codes 5.1,8

Although both materials are toxic . The oral LD₅₀ for pure CrO₃ is 75mg/kg, the mixture would be below 200mg/kg which would be a Class 6, Division 6.1 II and would be required "not to be shipped with food products."

In the Precedence of Hazard Table 173.2a:

The order of classes would be 5.1, 8 and then 6.1 II.

The 5.1 is the primary , and 8 secondary.

It would not be logical or acceptable to ship the Chromic acid mixture under Hazard class 6.1 ,PG II as the table indicates that 5.1, 8 would be the acceptable label code.

For Chromic acid solution (containing water and chromic acid):

Chromic acid solution, Hazard class is 8, UN1755, PG II and Label code is 8.

According to 173.132 , this solution should also be classed as a class 6 , Division 6.1

As 8 is the primary class, should the secondary class be 6.1, PG II and the Label codes be 8,6.1 according to your tables ?

For chromic acid solutions containing components other than water be then classified as :

Corrosive liquids, toxic, n.o.s. , Hazard class 8 , UN2922 ,PG II, Label codes 8,6.1 or

Corrosive liquids, toxic, n.o.s. , Hazard class 8,6.1 , UN2922 ,PG II, Label codes 8,6.1

Thank you in helping to clarify the labelling.

Sincerely,

Dr. Arnel D. Potter Telephone 8472341282 Fax 8472341380