



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

SEP 18 2013

1200 New Jersey Avenue, SE
Washington, D.C. 20590

Mr. Mark Connolly
Manager-Transportation Regulations and Security
Akzo Nobel Chemicals, Inc.
525 W. Van Buren Street
Chicago, IL 60607-3823

Ref. No. 13-0155

Dear Mr. Connolly:

This is in response to your letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR 171-180) applicable to the transportation of substances that may be corrosive to tank cars as identified in Appendix D of Part 180. Specifically, you ask whether your responses to the following two scenarios are correct:

Scenario 1: Sodium hydrosulfide solution (45%)

- Sodium hydrosulfide is listed by name in Appendix D of Part 178
- Our corrosion testing results on steel indicate a rate of 0.001811 inches per year for Sodium hydrosulfide solution (45%)

Akzo Nobel interpretation: Because the corrosion rate on steel of Sodium hydrosulfide solution (45%) is less than 2.5 mmy (0.0025 inches per year), the HMR do not require quality assurance or recordkeeping programs and periodic test and inspection marking as a result of Scenario 1.

Scenario 2: Sodium hydrosulfide solution (60%)

- Sodium hydrosulfide is listed by name in Appendix D of Part 178
- Our corrosion testing results on steel indicate a rate greater than 2.5 mmy (0.0025 inches per year) for Sodium hydrosulfide solution (60%)

Akzo Nobel interpretation: Because the corrosion rate on steel of Sodium hydrosulfide solution (60%) is greater than 2.5 mmy (0.0025 inches per year), the HMR do require quality assurance or recordkeeping programs and periodic test and inspection marking as a result of Scenario 2.

It is the opinion of this Office that the above responses to Scenarios 1 and 2 are correct. I trust this information is helpful. Please contact us if you require further assistance.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Stevens
§180.503
§180.509



13-0155
tank cars

AkzoNobel
Tomorrow's Answers Today

August 9, 2013

Director Standards and Rulemaking
Office of Hazardous Materials Safety
PHMSA
U.S. DOT
Attention: Mr. Charles Betts, PHH-10
1200 New Jersey Avenue
SE East Building, 2nd Floor
Washington, DC 20590

Subject: Request for Clarification Regarding Applicability of 49CFR180.503, 180.509(i) and Appendix D For Potential Shipment of Sodium Hydrosulfide 45% Solution in a Customer Owned Lined Tank Car

Dear Mr. Betts,

Akzo Nobel Functional Chemicals LLC (ANFC), a worldwide producer of chemicals, requests your review and clarification regarding the applicability of 49CFR180.503, 180.509(i), and Appendix D which require DOT quality assurance and periodic test/inspection marking and record keeping for tank cars transporting solutions of materials listed by name in Appendix D, which do not have a corrosion rate on steel >2.5mm (0.0025 inches per year);

I have discussed this with Karl Alexy of the Federal Railroad Administration and he concurs with our interpretation. We desire to obtain PHMSA review and clarification to prevent any miscommunication with tank car owners or others within the industry ensure

Below are two examples which we request your clarification:

The definition of material corrosive to the tank in 49CFR180.503 is that it identified in Appendix D of Part 180 or it has or it has a corrosion rate on steel of >2.5mm (0.0025 inches per year);

1. Material: Sodium hydrosulfide 45% solution.
 - Sodium hydrosulfide is listed by name in Appendix D to Part 180
 - The results of our corrosion testing on steel of our Sodium Hydrosulfide 45% solution indicated a rate of 0.001811 inches per year.

Our interpretation of the above is that DOT regulations do not require a quality assurance and periodic test/inspection marking and record keeping program for the above noted scenario.

2. Material: Sodium hydrosulfide 60% solution.
 - Sodium hydrosulfide is listed by name in Appendix D to Part 180
 - The results of corrosion testing on steel of our Sodium Hydrosulfide 60% solution indicated a rate > 0.0025 inches per year.

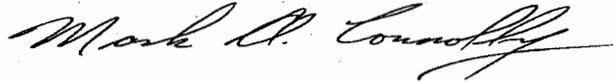
Our interpretation of the above is that DOT regulations require a quality assurance and periodic test/inspection marking and record keeping program for the above noted scenario.

As noted in the above scenarios, solutions with a corrosion rate > 0.0025 inches per year require the owner of the lining/coating to have a DOT required quality assurance program for application, and periodic inspection and test of internal lining/coating.

Owners and operators acknowledge that no in-service tank will deteriorate below the specified minimum thickness requirements of 49CFR.

Your prompt review and clarification of this issue is appreciated.
Please contact me if you need further information or have any questions on this matter.

Sincerely,



Mark A. Connolly
Manager, Transportation Regulations and Security
Tel (312) 544-7177
Tel (312) 544-7087
Email: mark.connolly@akzonobel.com