



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

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

**APR 13 2011**

Kurt Richardson, Ph.D.  
Research Director  
Anitox Corporation  
1055 Progress Circle  
Lawrenceville, GA 30043

Reference No. 10-0125

Dear Mr. Richardson:

This is in response to your letter, forwarded to us by Ms. Patricia De la Fuente, Manufacturing and Engineering Coordinator, Anitox Corporation, requesting clarification applicable to the classification and shipping description of your company's product, "Termin-8®," under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). You enclosed a material safety data sheet (MSDS), dated October 15, 2009, that identifies the product as "RQ, UN 3082, Environmentally hazardous substances, liquid, n.o.s. (Formaldehyde solutions), Class 9 (miscellaneous), PG III." The MSDS also states Termin-8 contains 33 percent formaldehyde, has a flash point of 130-134 °F (54-57 °C), and does not state all the ingredients in the solution to preserve their status as a trade secret, as defined in 29 CFR 1910.1200. We apologize for the delay in responding and any inconvenience this may have caused.

Section 173.22 requires a shipper to properly class and describe a hazardous material for transportation in commerce. This Office does not perform that function. However, based on the information you provided, it appears your determination is not correct. Under the HMR, a material with a 130-134 °F flashpoint meets the definition of a Class 3 (flammable liquid) at the Packing Group III (PG; minor) degree of danger. See §§ 173.120(a) and 173.121(a). Further, in accordance with the Hazardous Materials Table (§ 172.101) entry "UN 2209, Formaldehyde, solutions, with not less than 25 percent formaldehyde, 8, PG III," a solution that contains 25 percent or more of formaldehyde meets the definition of a Class 8 (corrosive) PG III material. Therefore, based on the precedence of hazard prescribed in § 173.2a, this material must be assigned a primary hazard Class 3 with a subsidiary hazard Class 8, and a more appropriate proper shipping name would be "UN 2924, Flammable liquids, corrosive, n.o.s. (Formaldehyde solutions), 3, 8, PG III."

You also asked if Termin-8 meets the definition of a hazardous substance under the HMR. A hazardous substance is defined as a material, including its mixtures and solutions, that—(1) is listed in the appendix A to § 172.101 of the HMR; (2) is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in that appendix; and, for formaldehyde, (3) when in a mixture or solution—...is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material. See § 171.8. For formaldehyde to meet

definition of a hazardous substance, the amount of formaldehyde in one package must meet or exceed 100 pounds (45.5 kg), and when in solution must meet or exceed a concentration by weight of 2,000 ppm or 0.2 percent. The MSDS you provided states Termin-8 has a reportable quantity of 300 pounds (135 kg) but does not provide the packaging size or configuration. Based on this information, and the fact that materials contained in the solution are concealed as a trade secret, it is impossible to know the total quantity of formaldehyde in a complete package or if other materials in the solution also meet the definition of a hazardous substance or other hazard class. Therefore, this Office recommends your company perform a review of the other ingredients in the solution similar to the one you performed for formaldehyde to ensure Termin-8 is being transported in full compliance with the HMR.

I hope this satisfies your request.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

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

cc: Ms. Patricia De la Fuente  
Manufacturing and Engineering Coordinator  
Anitox Corporation  
1055 Progress Circle  
Lawrenceville, GA 30043

Edmonson  
§ 172.101  
§ 172.203



Classification  
10-0125

To: Hattie L. Mitchell Fax: 202 366 7041  
From: Patricia De la Fuente Date: June 10, 2010  
Re: Classification and shipping description letter, needed w/ current date. Pages: 8 Including cover page

Mrs. Hattie:

I'm sending you a copy of the  
(1) MSDS (2) letter you sent us before back in 1996 (this is the one we need w/ current date and in attention to Kurt Richardson please) (3) letter from Kurt Richardson explaining that the formulation for our product ~~TERMIN~~ 8 has not change as you requested.

Hoping to hear soon from you.

Regards

Patricia De la Fuente  
Mfg and Eng. Coordinator  
678 376 3034



SOLUTIONS FOR SAFER FEED AND FOOD

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10 June 2010

Mrs. Hattie L. Mitchell  
Exemptions and Regulations Terminations  
Office of Hazardous Standards  
400 Seventh Street, S.W.  
Washington, DC 20490

Dear Mrs. Mitchell:

The formulation for Termin-8 has not changed since we received the prior DOT letter on proper product classification/shipping class.

Sincerely,

Kurt Richardson, PhD  
Research Director  
K02010

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2



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

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

SEP 5 1996 ✓

Ms. Linda S. Isbill  
Safety Coordinator  
Anitox Corporation  
P.O. Box 1929  
Buford, GA 30518

Dear Ms. Isbill:

This is in response to your letter of January 25, 1996, and January 29, 1996 telephone conversations with Ms. Eileen Martin of my staff and Mr. Bob Richard, Assistant International Standards Coordinator for the Office of Hazardous Materials Safety, concerning the classification and shipping description for your product, identified as Termin-8. You inquired if it is acceptable to describe the product as "Environmentally hazardous substances, liquid, n.o.s., (RQ Aldehyde Acid Solution) Class 9, UN3082, PG III," when transported both domestically and internationally by motor vehicle, rail, and vessel.

Additional data was submitted stating that Termin-8 is a Class 9 (miscellaneous) material and is not a Class 3 (flammable liquid) or Class 8 (corrosive) material under the Hazardous Materials Regulations (49 CFR Parts 171-180). The product contains formaldehyde and, when packaged in a 55 gallon drum, will exceed the RQ value for a hazardous substance.

We agree with your determination that the basic description for the product is "Environmentally hazardous substance, liquid, n.o.s., Class 9, UN3082, PG III." This basic description is acceptable for both domestic and international transportation. However, there are two discrepancies in your suggested description. First, the letters "RQ" must appear either before or after the basic description, as required by § 172.203(c)(2). Second, the name of the hazardous substance must be as shown in the § 172.101, Appendix A Table, as required by 172.203(c)(1)(i). Therefore, the name

"formaldehyde" instead of "aldehyde acid solution" must be shown within the parentheses.

I hope this information is helpful. Please contact us if we can assist you further.

Sincerely,

*Hattie L. Mitchell - Ph. 202 3664477*

Hattie L. Mitchell, Chief  
Exemptions and Regulations Terminations  
Office of Hazardous Materials Standards

*Ph. 202 3664477*





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MSDS 019

#### SECTION VI. ACCIDENTAL RELEASE MEASURES

##### Steps to be taken in case Material is Released or Spilled

Eliminate ignition sources. Avoid eye or skin contact. Place damaged containers in well-ventilated area. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage or disposal. To clean up released material wear protective gear as indicated in Section IV. Clean up methods may include absorbent materials, vacuum truck, etc. Avoid runoff into storm sewers and ditches that lead to natural waterways. Neutralize with ammonium hydroxide or sodium sulfite. Comply with Federal, State, and Local regulations before disposal. Call the National Response Center (800.424.8802) if spill is equal to or greater than reportable quantity (300lb/day). All clean up and disposal should be carried out in accordance with Federal, State, and Local regulations. If required, State and Local authorities should be notified.

#### SECTION VII. HANDLING AND STORAGE

##### Handling:

Use with adequate ventilation. Keep containers closed when not in use. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Keep away from heat, sparks, and flame.

##### Storage:

Keep all containers tightly closed when not in use. Do not enter storage area unless it is adequately ventilated. Do not store with incompatible materials, see "Section X - Stability and Reactivity". Do not Freeze.

#### SECTION VIII. EXPOSURE CONTROL/PERSONAL PROTECTION

##### Engineering Controls:

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred.

##### Protective Equipment:

A safety shower and eye bath should be readily available.

##### Skin:

Wear impervious clothing and gloves to prevent repeated or prolonged contact.

##### Eyes:

Wear goggles when there is a reasonable chance of eye contact.

##### Inhalation:

Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH/MSHA. The following is the minimum recommended equipment for an acceptable level of exposure. (To estimate an acceptable level of exposure, see "Section III - Hazards Identification", "Section VIII - Exposure Controls/Personal Protection", and "Section XI - Toxicological Information".

For Termin-8 concentrations  $\geq 1$  and  $\leq 10$  times the acceptable level: Use air-purifying respirator with full facepiece fitted with either cartridge(s) or canister specifically approved for protection against formaldehyde.

For Termin-8 concentrations  $> 10$  and  $< 100$  times the acceptable level: Use Type C full facepiece supplied air pressure-demand or continuous-flow respirator.

For Termin-8 concentrations  $\geq 100$  times the acceptable level or for unknown concentration (such as in emergencies): Use positive-pressure self-contained breathing apparatus with full facepiece.

For escape: Use positive-pressure self-contained breathing apparatus with full facepiece (chin canister style front or back mounted type) and industrial size canister specifically approved for protection against formaldehyde.

##### Exposure Guidelines OSHA PEL:

Formaldehyde (50-00-0) 2 ppm (STEL), 0.75 ppm (TWA)

#### SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

##### Appearance:

Light orange color, liquid

##### Odor:

Strong, pungent, characteristic odor

##### Physical State:

Liquid

##### Vapor Pressure:

Not Applicable (N/A)

##### Vapor Density:

N/A

##### Boiling Point:

197.6°F (92°C)

##### Freezing Point:

-33.6°F (-36°C); ASTM D-2386

##### Solubility:

>99% soluble in water

##### Specific Gravity:

1.08 to 1.10 at 20°C

##### Viscosity:

3.03 (centistokes) @25°C

#### SECTION X. STABILITY AND REACTIVITY

##### Chemical Stability:

Stable

##### Conditions to Avoid:

Heat; sparks; flame

##### Incompatibility:

Caustic soda, soda ash and other alkalis; sodium, potassium and other alkali metals; amines; acids; oxygen, hydrogen peroxide, and other strong oxidizing agents.

APPROVAL AUTHORITY: Technical Director  
EFFECTIVE DATE: Oct 15, 2009

1055 Progress Circle Lawrenceville, GA 30043  
678.376.1055 800.241.8357 Fax 678.376.1413

PAGE 2 OF 4  
REVISION #: 8

6

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**Hazardous Decomposition Products:**

Carbon monoxide. Hazardous formaldehyde vapors are released if burned.

**Hazardous Polymerization:**

Will not occur.

**SECTION XI. TOXICOLOGICAL INFORMATION**

No human toxicity studies have been conducted on Termin-8®. However this product contains 33% formaldehyde. Results from prior studies are presented on formaldehyde.

over 25%  
= 8, PG III

**Oral LD<sub>50</sub>:**

Formaldehyde - 0.8 g/kg (rats); slightly toxic to animals.

**Dermal LD<sub>50</sub>:**

Formaldehyde - 0.27 g/kg (rabbit); moderately irritating to skin.

**Inhalation LC<sub>50</sub>:**

Formaldehyde - >0.3 mg/l (rats, 4 hours); moderately toxic to animals.

**Mutagenicity:**

Formaldehyde is mutagenic (mutagenic activity detected in E. Coli, Pseudomonas fluorescens, and Saccharomyces cerevisiae).

**Carcinogenicity:**

Not considered carcinogenic to humans when used under OSHA approved exposure levels. Personal and work area monitoring are required to ensure safe worker exposure levels.

**Reproduction:**

Formaldehyde showed no evidence of reproductive effects in animal studies (mice, rats, and dogs).

**Other:**

Formaldehyde showed no evidence of effects on liver, kidneys, nervous system or blood in 180 day studies of rats, monkeys, and hamsters.

**SECTION XII. ECOLOGICAL INFORMATION**

**Ecological Information:**

This information is being researched.

**SECTION XIII. DISPOSAL CONSIDERATIONS**

**Disposal:**

All notification, clean up and disposal should be carried out in accordance with Federal, State, and Local regulations. Hazardous waste (40 CFR 261).

**SECTION XIV. TRANSPORT INFORMATION**

**Shipping Name:**

Environmentally hazardous substances, liquid, n.o.s., (Formaldehyde, solutions)

**DOT Hazard Class:**

9

**United Hazard Class:**

UN3082

**Packing Group:**

III

**DOT Reportable Quantity (RQ):**

300 lb/135 kg, Termin-8

**Note:** This solution has been evaluated by D.O.T. testing methods (49CFR) and determined not to be flammable/corrosive.

**SECTION XV. REGULATORY INFORMATION**

**State Regulation:**

Recipient must communicate all pertinent information herein to employees and customers. The following chemicals associated with the product are subject to the right-to-know regulation in these states: Formaldehyde (50-00-0): California, Connecticut, Florida, Illinois, Louisiana, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, and Rhode Island.

**Federal Regulations:**

OSHA formaldehyde standard: This product is capable of emitting free formaldehyde and is covered by the OSHA Formaldehyde Standard, 29 CFR 1910.1048.

**Environmental:**

May be subject to SARA 302 and 313 reporting depending upon facility applicability.

**International Regulations:**

Listed on the chemical inventories of the following countries: Australia, Canada, Europe (EINECS), Japan, and Korea.

**WHMIS Ingredient Disclosure Listed Components:**

WHMIS Classification: Class B, Division 3.

**SECTION XVI. OTHER INFORMATION**

**MSDS Prepared by:**

Anitox Corp.

7

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