

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

# APR 1 3 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,

V. Alenn Faster

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 - 0125To: Hattie L. Mitchell Fax: 2023667041 From: Patricia De la Fuente Date: June 10, 2010 Re: Class i fication and Shipping description letter, necded w/ current Pages: 8 Including Cover page date.

Mrs. Hattie. I'm sending you a copy of the (1) MSDS(2) letter you sent is 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 requisted. Hoping to hear soon from you. Kegards Patricia De la fuente Mg and Eng. Koordinator 678 376 3034

Tel: 678.376.1055 Fax: 678.376.1413 email: anitox@anitox.com



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NORTH AMERICA 1055 Progress Circle Lawrenceville, GA 30043

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10 June 2010

Mrs. Hattie L. Mitchell Exemptions and Regulations Terminations Office of Hazardous Standards 400 Seventh Street, S.W. Washignton, 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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## DEPT TRANSPORTATION

No. 6891 P. 3/8 No. 864 P. 2/3



U.S. Department of Transportation

Research and Special Programs Administration

5 1996 v SEP

5:28PM

Mg. 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

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"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.

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10-Ph. 2023664977 Sincerely,

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

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# Attn: HattieL. Mitchell





## MATERIAL SAFETY DATA SHEET

SECTION I PRODUCT INFORMATION	SECTION IV. FIRST AID MEASURES
	Skín:
Product Name:	Wash contaminated skin with large amounts of soap and water. If initation persists,
TERMIN-8®	opontact a physician.
Manufacturer:	Eyes:
Anitox Corp. 1055 Progress Circle Lawrenceville, GA 30043 USA	Flush eyes with water for at least 15 minutes. Contact a physician immediately.
Emergency Telephone:	Inhalation:
	Remove patient from contaminated area. If breathing has stopped, give artificial
678.376.1055 800.241.8357 Chemtrec 800.424.9300	respiration, then oxygen, if needed. Contact a physician immediately.
International Calls - Chemtrec 703.527.3887 (Collect calls accepted)	Ingestion;
·	Do not attempt to induce vomiting, neutralize by drinking 4 to 8 ounces of milk or
SECTION II. COMPOSITION/INFORMATION INGREDIENTS	activated charcoal if available. Get medical attention immediately.
Composition:	SECTION V. FIRE FIGHTING MEASURES
Trade Secret (According to 29 CFR 1910.1200)	
	NFPA (H,F,R):
SECTION UL HAZARDS IDENTIFICATION	
	3,1,0
This product is light orange in color with a strong irritating odor.	Flammable Properties:
Emergency Overview:	(ASTM D-56)
Caution: Initiant	Flashpoint
Caution. Initiat	$130 - 134^{\circ}F(54 - 57^{\circ}C) > = 3, PGTIIL$
	Upper Explosive Limit:
POTENTIAL HEALTH EFFECTS	Upper Explosive Limit: 72% in air by volume
	Lower Explosive Limit:
Routes of Exposure:	Lower Explosive Limit: 7% in air by volume
Skin, Eyes, Inhalation, Ingestion	Hazardous Products of Combustion:
Skin Effects:	Flammability combustion: Termin-8 liquid will not sustain combustion at 141°F to
Can cause moderate injury: reddening and swelling; sensitizer (allergic reaction	167°F (UN Test L2).
possible). Can cause drying, cracking, and scaling. Repeated or prolonged contact	Extinguishing media:
causes hardening (tanning). May cause initation.	Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming
Eves:	
Can cause chemical burn (damage irreversible). Vapor causes initation, tearing, and	foam or water spray for large fires.
burning sensation.	Fire Fighting Instructions:
Inhalation:	If potential for exposure to vapors or products of combustion exists, wear personal
Highly irritating to nasal passages. Can cause inflammation of lining of nose, throat,	protective equipment, including self-contained breathing apparatus with full facepiece
and lungs. Can cause pneumonia and abnormal accumulation of fluid in the lungs.	operated in pressure demand or other positive pressure mode. Water spray can be
Sensitizer (allergic reaction possible). May cause sensitization of the respiratory	used to reduce intensity of flames and to dilute spills to nonflammable moture. Use
	water spray to cool fire-exposed structures and vessels.
system.	
Ingestion:	
Causes severe irritation and inflammation of mouth, throat, and stomach. Ingestion	1
may result in blindness, stupor, nausea, and vomiting leading to severe illness and	1
possibly death, if treatment is not received.	

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#### SECTION VI. ACCIDENTAL RELEASE MEASURES

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

Eliminate ignition sources. Avoid eve 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 eves, skin, and clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before reuse. 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. Eves:

Wear goggles when there is a reasonable chance of eve 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 (dentification", "Section VIII - Exposure Controls/Personal Protection", and "Section XI - Toxicological Information".

**MSDS 019** 

For Termin-8 concentrations >1 and <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 ≥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 grange color, liquid Odor Strong, pungent, characteristic odor Physical State: Liquid Vapor Pressure: Not Applicable (N/A) Vapor Density: -N/Å **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.

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MSDS 019

over 252 = 8, PG III	Hazardous Decomposition Products: Carbon monoxide. Hazardous formaldehyde vapors are release 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.	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.
	Oral LD <sub>56</sub> : Formaldehyde - 0.8 g/kg (rats); slightly toxic to animals. Dermal LD <sub>56</sub> : Formaldehyde - 0.27 g/kg (rabbit); moderately imitating 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 <u>E, Coli, Pseudomonas,</u> fluorescence, and <u>Saccharomyces cervisiae</u> ). 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:	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-fo-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: Usted 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.

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## Hazard Ratings:

	HEALTH	FLAMM	REACT	OTHER
NFPA	3	1	0	
HMIS	3	2	0	

#### Disclaimer:

This information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Anitox Corp. makes no warranty of any kind, expressed or implied, concerning the safe use of this material in your process or combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

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 4 OF 4 REVISION #: 8 c