



U.S. Department
of Transportation

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

**Pipeline and Hazardous
Materials Safety
Administration**

Peter Leus
HS&E Coordinator
Rockline Industries
1113 Maryland Ave.
Sheboygan, WI 53081

OCT 21 2015

Ref. No.: 15-0151

Dear Mr. Leus:

This is a response to your July 20, 2015 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the classification of an aqueous solution of alcohol. In your letter, you state that you have an aqueous solution which consists of four individual components other than water:

Component	CAS Number	Wt (%)
Isopropyl Alcohol	67-63-0	21.0 %
Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	.154 %
Alkyl Dimethyl Ethyl Benzyl Ammonium Chloride	68956-79-6	.154 %
Ethylene Glycol Monobutyl Ether	111-76-2	de minimis

Specifically, you ask whether Germicidal Solution® is eligible for the aqueous solutions of alcohol exception provided in § 173.150(e)(2) of the HMR in that the material is not subject to the requirements of the subchapter if it contains no less than 50 percent water.

The exception for aqueous solutions of alcohol, as provided in § 173.150(e) of the HMR, is not applicable when another hazardous material is added to the solution. The term “hazardous material” is defined in § 171.8 as follows:

“a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter.”

This Office does not determine if components of a solution are hazardous. Under § 173.22 of the HMR, this responsibility is placed on the shipper. If a component (i.e., Alkyl Dimethyl Benzyl Ammonium Chloride, Alkyl Dimethyl Ethyl Benzyl Ammonium Chloride, or Ethylene Glycol Monobutyl Ether) is a hazardous material under the HMR, the exception in § 173.150(e) does not apply. However, if you can establish that the other components

used in your solution do not meet the definition of a hazardous material, then it is eligible for the exception in § 173.150(e).

I hope this information is helpful. If you have any more questions, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster". The signature is written in black ink and is positioned above the typed name.

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

Goodall, Shante CTR (PHMSA)

*Neckels
173.150
Exceptions for Class 3
15-0154*

From: Geller, Shelby CTR (PHMSA)
Sent: Tuesday, July 21, 2015 3:01 PM
To: Hazmat Interps
Subject: FW: Interpretation Request
Attachments: DOT Interpretation Request - Germicidal Solution.pdf; Weiman Germicidal Solution SDS.PDF; Regulations 173.150 and 173.132.pdf

Dear Shante and Alice,

Please see the request for a formal letter of interpretation.

Thanks,
Shelby

From: Peter Leus [<mailto:PALeus@ROCKLINEIND.com>]
Sent: Monday, July 20, 2015 9:19 PM
To: PHMSA HM InfoCenter
Subject: Interpretation Request

Please refer to the attachments.

Thank you for your assistance.

Peter Leus

HS&E Coordinator
Rockline Industries
1113 Maryland Ave.
Sheboygan, WI 53081

Cell: 920-334-0146

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ROCKLINE

INDUSTRIES

July 20, 2015

U.S. DOT

PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

Rockline is requesting an interpretation regarding the DOT classification of alcohol water solutions. It is our understanding that 49 CFR §173.150(e)(2) exempts solutions of less than 24% alcohol and more than 50% water from DOT requirements if there are no other hazardous materials in the solution. For your consideration an SDS for a "Germicidal Solution" is attached. Also attached are the relevant regulations regarding this product. This aqueous solution with greater than 50% water contains Isopropyl Alcohol (CAS 67-63-0) at 21.0% which is less than the 24% threshold in §173.150(e). It has a flash point of 86 F.

The other ingredients are:

- Alkyl Dimethyl Benzyl Ammonium Chloride (68391-01-5) at 0.154%,
- Alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (68956-79-6) at 0.154%, and
- Ethylene Glycol Monobutyl Ether (111-76-2) which is below deminimus concentration.

Because each of the individual materials could be considered toxic by either inhalation, oral, or dermal exposures Rockline is considering conducting review and if necessary testing outlined in 49 CFR §173.132(c)(1)- (c)(4) to demonstrate that the mixed solution does not meet the toxicity criteria defined in §173.132(a)and (b). This may include literature review and documentation of inhalation toxicity, dermal and oral toxicity testing, and if adequate data is readily available for individual components, calculation of toxicity as outlined in §173.132(c)(3).

This inquiry wishes confirmation that if our review and testing show toxicity below the levels stated in §173.132(a)and (b) that we would be able to claim the §173.150(e)(2) exception and not have to placard semi trailers or otherwise label the containers?

Please contact me for any additional information that you may require.

Sincerely,

Peter Leus

HS&E Coordinator
Rockline Industries
1113 Maryland Ave.
Sheboygan, WI 53081
Cell: 920-334-0146

other similar property which could cause extreme annoyance or discomfort to a flight crew member so as to prevent the correct performance of assigned duties; or

(b) Any material that meets the definition in §171.8 of this subchapter for an elevated temperature material, a hazardous substance, a hazardous waste, or a marine pollutant.

§173.141 Class 9—Assignment of packing group.

The packing group of a Class 9 material is as indicated in Column 5 of the §172.101 Table.

§173.144 Other Regulated Materials (ORM)—Definitions.

For the purpose of this subchapter, ORM-D material means a material such as a consumer commodity, which, although otherwise subject to the regulations of this subchapter, presents a limited hazard during transportation due to its form, quantity and packaging. It must be a material for which exceptions are provided in the §172.101 Table. Each ORM-D material and category of ORM-D material is listed in the §172.101 Table.

§173.145 Other Regulated Materials—Assignment of packing group.

Packing groups are not assigned to ORM-D materials.

§173.150 Exceptions for Class 3 (flammable and combustible liquids).

(a) *General.* Exceptions for hazardous materials shipments in the following paragraphs are permitted only if this section is referenced for the specific hazardous material in the §172.101 Table of this subchapter.

(b) *Limited quantities.* Limited quantities of flammable liquids (Class 3) and combustible liquids are excepted from labeling requirements, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of §173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

(1) For flammable liquids in Packing Group I, inner packagings not over 0.5 L (0.1 gallon) net capacity each, packed in strong outer packagings;

(2) For flammable liquids in Packing Group II, inner packagings not over 1.0 L (0.3 gallons) net capacity each, unless the material has a subsidiary hazard of Division 6.1, Packing Group II, in which case the inner packagings may not exceed 100 mL (3.38 ounces) net capacity each, packed in a strong outer packaging.

(3) For flammable liquids in Packing Group III and combustible liquids, inner packagings not over 5.0 L

(1.3 gallons) net capacity each, packed in strong outer packagings.

(c) *Consumer commodities.* Except for a material that has a subsidiary hazard of Division 6.1, Packing Group II, a limited quantity which conforms to the provisions of paragraph (b) of this section and is a "consumer commodity" as defined in 171.8 of this subchapter, may be renamed "Consumer commodity" and reclassified as ORM-D material. In addition to the exceptions provided by paragraph (b) of this section, shipments of ORM-D materials are not subject to the shipping paper requirements of subpart C of part 172 of this subchapter, unless the material meets the definition of a hazardous substance, hazardous waste, marine pollutant, or are offered for transportation and transported by aircraft, and are eligible for the exceptions provided in §173.156.

(d) *Alcoholic beverages.* An alcoholic beverage (wine and distilled spirits as defined in 27 CFR 4.10 and 5.11) is not subject to the requirements of this subchapter if it—

(1) Contains 24 percent or less alcohol by volume;

(2) Is in an inner packaging of 5 L (1.3 gallons) or less, and for transportation on passenger-carrying aircraft conforms to §175.10(a)(17) of this subchapter as checked or carry-on baggage; or

(3) Is a Packing Group III alcoholic beverage in a packaging of 250 L (66 gallons) or less, unless transported by air.

(e) *Aqueous solutions of alcohol.* An aqueous solution containing 24 percent or less alcohol by volume and no other hazardous material—

(1) May be reclassified as a combustible liquid.

(2) Is not subject to the requirements of this subchapter if it contains no less than 50 percent water.

(f) *Combustible liquids.* (1) A flammable liquid with a flash point at or above 38°C (100°F) that does not meet the definition of any other hazard class, may be reclassified as a combustible liquid. This provision does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable.

(2) The requirements in this subchapter do not apply to a material classed as a combustible liquid in a non-bulk packaging unless the combustible liquid is a hazardous substance, a hazardous waste, or a marine pollutant.

(3) A combustible liquid that is in a bulk packaging or a combustible liquid that is a hazardous substance, a hazardous waste, or a marine pollutant is not subject to the requirements of this subchapter except those pertaining to:

(i) Shipping papers, waybills, switching orders, and hazardous waste manifests;

(ii) Marking of packages;

(iii) Display of identification numbers on bulk packages;

(iv) For bulk packagings only, placarding requirements of subpart F of part 172 of this subchapter;

(v) Carriage aboard aircraft and vessels (for packaging requirements for transport by vessel, see §176.340 of this subchapter);

(vi) Reporting incidents as prescribed by §§171.15 and 171.16 of this subchapter;

(vii) Packaging requirements of subpart B of this

(d) *Approvals.* (1) An organic peroxide must be approved, in writing, by the Associate Administrator, before being offered for transportation or transported, including assignment of a generic type and shipping description, except for—

- (i) An organic peroxide which is identified by technical name in the Organic Peroxides Table in §173.225(c);
- (ii) A mixture of organic peroxides prepared according to §173.225(b); or
- (iii) An organic peroxide which may be shipped as a sample under the provisions of §173.225(b).

(2) A person applying for an approval must submit all relevant data concerning physical state, temperature controls, and tests results or an approval issued for the organic peroxide by the competent authority of a foreign government.

(e) *Tests.* The generic type for an organic peroxide shall be determined using the testing protocol from Figure 20.1(a) (Classification and Flow Chart Scheme for Organic Peroxides) from the UN Manual of Tests and Criteria (IBR, see §171.7 of this subchapter).

§173.129 Class 5, Division 5.2—Assignment of packing group.

All Division 5.2 materials are assigned to Packing Group II in Column 5 of the §172.101 Table.

§173.132 Class 6, Division 6.1—Definitions.

(a) For the purpose of this subchapter, **poisonous material** (Division 6.1) means a material, other than a gas, which is known to be so toxic to humans as to afford a hazard to health during transportation, or which, in the absence of adequate data on human toxicity:

(1) Is presumed to be toxic to humans because it falls within any one of the following categories when tested on laboratory animals (whenever possible, animal test data that has been reported in the chemical literature should be used):

(i) *Oral Toxicity.* A liquid with an LD₅₀ for acute oral toxicity of not more than 500 mg/kg or a solid with an LD₅₀ for acute oral toxicity of not more than 200 mg/kg.

(ii) *Dermal Toxicity.* A material with an LD₅₀ for acute dermal toxicity of not more than 1000 mg/kg.

(iii) *Inhalation Toxicity.* (A) A dust or mist with an LC₅₀ for acute toxicity on inhalation of not more than 10 mg/L; or

(B) A material with a saturated vapor concentration in air at 20°C (68°F) greater than or equal to one-fifth of the LC₅₀ for acute toxicity on inhalation of vapors and with an LC₅₀ for acute toxicity on inhalation of vapors of not more than 5000 mL/m³; or

(2) Is an irritating material, with properties similar to tear gas, which causes extreme irritation, especially in confined spaces.

(b) For the purposes of this subchapter—

(1) LD₅₀ (median lethal dose) for acute oral toxicity is the statistically derived single dose of a substance that can be expected to cause death within 14 days in 50% of young adult albino rats when administered by the oral route. The LD₅₀ value is expressed in terms of mass of test substance per mass of test animal (mg/kg).

(2) LD₅₀ for acute dermal toxicity means that dose of the material which, administered by continuous con-

tact for 24 hours with the shaved intact skin (avoiding abrading) of an albino rabbit, causes death within 14 days in half of the animals tested. The number of animals tested must be sufficient to give statistically valid results and be in conformity with good pharmacological practices. The result is expressed in mg/kg body mass.

(3) LC₅₀ for acute toxicity on inhalation means that concentration of vapor, mist, or dust which, administered by continuous inhalation for one hour to both male and female young adult albino rats, causes death within 14 days in half of the animals tested. If the material is administered to the animals as a dust or mist, more than 90 percent of the particles available for inhalation in the test must have a diameter of 10 microns or less if it is reasonably foreseeable that such concentrations could be encountered by a human during transport. The result is expressed in mg/L of air for dusts and mists or in mL/m³ of air (parts per million) for vapors. See §173.133(b) for LC₅₀ determination for mixtures and for limit tests.

(i) When provisions of this subchapter require the use of the LC₅₀ for acute toxicity on inhalation of dusts and mists based on a one-hour exposure and such data is not available, the LC₅₀ for acute toxicity on inhalation based on a four-hour exposure may be multiplied by four and the product substituted for the one-hour LC₅₀ for acute toxicity on inhalation.

(ii) When the provisions of this subchapter require the use of the LC₅₀ for acute toxicity on inhalation of vapors based on a one-hour exposure and such data is not available, the LC₅₀ for acute toxicity on inhalation based on a four-hour exposure may be multiplied by two and the product substituted for the one-hour LC₅₀ for acute toxicity on inhalation.

(iii) A solid substance should be tested if at least 10 percent of its total mass is likely to be dust in a respirable range, e.g. the aerodynamic diameter of that particle-fraction is 10 microns or less. A liquid substance should be tested if a mist is likely to be generated in a leakage of the transport containment. In carrying out the test both for solid and liquid substances, more than 90% (by mass) of a specimen prepared for inhalation toxicity testing must be in the respirable range as defined in this paragraph (b)(3)(iii).

(c) For purposes of classifying and assigning packing groups to mixtures possessing oral or dermal toxicity hazards according to the criteria in §173.133(a)(1), it is necessary to determine the acute LD₅₀ of the mixture. If a mixture contains more than one active constituent, one of the following methods may be used to determine the oral or dermal LD₅₀ of the mixture:

(1) Obtain reliable acute oral and dermal toxicity data on the actual mixture to be transported;

(2) If reliable, accurate data is not available, classify the formulation according to the most hazardous constituent of the mixture as if that constituent were present in the same concentration as the total concentration of all active constituents; or

Product Code: S5N, S5NQ, S5N55

MATERIAL SAFETY DATA SHEET

Comply with OSHA'S Hazard Communication Standard, 29 CFR 1910.1200.

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HMIS RATING: HEALTH = 1 FLAMMABILITY = 3 REACTIVITY = 0 PROTECTION = B

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Germicidal Solution
Manufacturer: Weiman Products
755 Tri-State Parkway
Gurnee, IL 60031
847-263-3500

Emergency Contact:
24-Hour Number: 1-800-535-5053
International: 1-352-323-3500
or contact your regional Poison Control.

MSDS Issue Date: 02/10/11

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Wt % (optional)	OSHA PEL	ACGIH TLV	Other Limits Recommended
Isopropyl Alcohol	67-63-0	21.0	400 ppm	400 ppm	N/D
Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	0.154	N/D	N/D	N/D
Alkyl Dimethyl Ethyl Benzyl Ammonium Chloride	68956-79-6	0.154	N/D	N/D	N/D
Ethylene Glycol Monobutyl Ether	111-76-2	--	25 ppm	25 ppm	N/D

SECTION 3 – HAZARD IDENTIFICATION

Routes of Entry: Eye contact, skin contact, skin absorption, inhalation, ingestion.

Effects of Acute Exposure:

Inhalation: Prolonged or repeated contact may cause lightheadedness and/or irritation to nose and throat.

Eyes: Contact may cause irritation.

Skin: Prolonged or repeated contact may cause irritation.

Ingestion: Ingestion can cause gastrointestinal irritation.

Effects of Chronic Exposure: None known.

Medical Conditions Generally Aggravated by Exposure: Dermatitis and other pre-existing skin conditions.

Carcinogenicity: NTP: N/A IARC Monographs: N/A OSHA Regulated: N/A

SECTION 4 – FIRST AID MEASURES

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

Eyes: Rinse with water for at least 15 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. If irritation persists, seek medical attention immediately.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation persists, seek medical attention.

Ingestion: Rinse mouth and throat with water. Drink a quart of water. Get medical attention immediately.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point (Method Used): 86°F TCC

Flammable Limits: N/A

Autoignition Temperature: N/A

Extinguishing Media: Alcohol foam, carbon dioxide, or dry chemical.

Special Fire Fighting Procedures: Follow NIOSH recommended guidelines for alcohol fires.

Unusual Fire and Explosion Hazards: Vapors can be heavier than air. Never use torch or other source of flame near the product.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Steps to Be Taken in Case Material is Released or Spilled: Absorb spill with an absorbent material and place in container for disposal. Wash the contaminated area with water.

SECTION 7 – HANDLING AND STORAGE

Precautionary Information: Keep out of reach of children

Handling and Storage Conditions: Do not store near heat or open flame. Keep container closed when not in use. Avoid breathing of vapors and contact with eyes, skin, or clothing.

Product Code: S5N, S5NQ, S5N55

MATERIAL SAFETY DATA SHEET

Comply with OSHA'S Hazard Communication Standard, 29 CFR 1910.1200.

Printed: 6/10/2011
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SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

Ventilation: General ventilation normally adequate.
Respiratory Protection (Specific Type): None.
Protective Gloves: Latex, rubber, nitrile, or polyethylene.
Eye Protection: Safety glasses.
Other Protective Clothing or Equipment: None.
Work/Hygienic Practices: None.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Color: Colorless	Product State: Liquid
Odor: Alcohol	Boiling Point: N/D
Specific Gravity (H₂O = 1): 0.96	Vapor Pressure (mm Hg.): N/D
Melting Point: N/A	Vapor Density (AIR = 1): N/D
Evaporation Rate (Butyl Acetate = 1): N/A	Solubility in Water: Complete
pH: 7.5	VOC: N/D

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.
Incompatibility (Materials to Avoid): Strong oxidizing agents.
Hazardous Decomposition or By-products: May include and are not limited to oxides of carbon.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Heat, open flames, sparks.

SECTION 11- TOXICOLOGICAL INFORMATION

Toxicological Data: N/A

SECTION 12- ECOLOGICAL INFORMATION

Environmental Data: N/A

SECTION 13- DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with all applicable local, state, and federal regulations.

SECTION 14- TRANSPORTATION INFORMATION

Domestic Ground Transport of Non-Bulk Packages: Aqueous Solution of Alcohol {173.150 (e) (2)}, Ltd. Qty.

Air and International Shipments: Alcohols, n.o.s., (Isopropanol), 3, UN1987, Pkg. Grp. III

SECTION 15- REGULATORY INFORMATION

All ingredients in this product are listed or are excluded from listing on the US Toxic Substances Act (TSCA) Chemical Substance Inventory.

SARA Title III, Section 313 reportable chemicals: Ethylene Glycol Monobutyl Ether.

SECTION 16 – OTHER INFORMATION

Additional Information: Use as directed.

Note: N/A or N/D as an information entry means the data is not applicable or determined, respectively. This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the information contained within. Actual conditions of use, handling, storage, and disposal are beyond manufacturer's control. User is responsible to evaluate all available information when using this product for any particular use and to comply with local, state, and federal regulations.