U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

OCT 25 2019

Bob Richard
Hazmat Safety Consulting LLC
10036 Lake Occoquan Drive
Manassas, VA 20111

Reference No. 18-0091

Dear Mr. Richard:

This letter is in response to your June 18, 2018, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to exceptions for passengers, crewmembers, and air operators. Specifically, you ask if a passenger may carry a 30-milliliter sterilization cartridge of nitric acid (Packing Group II, with not more than 20 percent) aboard a passenger aircraft in accordance with § 175.10 of the HMR. You state that the product in question is meant for doctors conducting humanitarian relief to sterilize medical tools in remote areas without access to electricity.

The answer is no. It is the opinion of this Office that the material in the quantity specified would not be permissible for carriage aboard passenger aircraft under § 175.10(a)(1).
Section 175.10(a)(1) allows non-radioactive medicinal and toilet articles for personal use to be carried in carry-on and checked baggage. The sterilization cartridges as described in your scenario are not for personal use. However, it should be noted that these cartridges can be transported as cargo in accordance with the HMR.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster

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

Wolcott

18-0091

January, Ikeya CTR (PHMSA)

From: Kelley, Shane (PHMSA)
Sent: Monday, June 18, 2018 1:56 PM
To: January, Ikeya CTR (PHMSA)
Cc: DerKinderen, Dirk (PHMSA); Foster, Glenn (PHMSA); Nickels, Matthew (PHMSA)
Subject: FW: EniWare Nitric Acid
Attachments: 070091.pdf; 080253.pdf; 090018.pdf; Sample Letter of Interp.docx; Nitric Acid 19.8% v1 9-2015.pdf

Another interp request! Please assign for action.

Thanks

From: Bob Richard [mailto:brichard@hazmatsafety.com]
Sent: Monday, June 18, 2018 1:54 PM
To: Kelley, Shane (PHMSA) <shane.kelley@dot.gov>
Subject: RE: EniWare Nitric Acid

Shane,

Thanks for the call today and regarding my question related to whether 30 ml sterilization cartridges that contain small amounts of nitric acid (PG II less than 20%) can be carried by passengers in checked baggage. The cartridges are untended to be taken in checked luggage by doctors and medical practitioners when travelling for humanitarian relief missions where they may need to sterilize their surgical tools in remote areas without access to electricity. I believe that passengers can consider the cartridges as medicinal articles for personal use. We are writing to request a written interpretation letter so that if passengers are questioned by airlines the letter can be used to clear up any misunderstanding. I have attached several interp letters previously issued that substantiate the fact that our articles are authorized for carriage by passengers.

175.10(a)(1)

(a) This subchapter does not apply to the following hazardous materials when carried by aircraft passengers or crewmembers provided the requirements of §§171.15 and 171.16 (see paragraph (c) of this section) and the requirements of this section are met:

(1)(i) Non-radioactive medicinal and toilet articles for personal use (including aerosols) carried in carry-on and checked baggage. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release;

(ii) Other aerosols in Div. 2.2 (nonflammable gas) with no subsidiary risk carried in checked baggage only. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release; and

(iii) The aggregate quantity of these hazardous materials carried by each person may not exceed 2 kg (70 ounces) by mass or 2 L (68 fluid ounces) by volume and the capacity of each container may not exceed 0.5 kg (18 ounces) by mass or 500 ml (17 fluid ounces) by volume.

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Nitric Acid 19.8%**

Product Code: 105812-1885-1

Synonyms/Generic Names: N/A

Manufacturer:
Acid Products Company Inc.
600 West 41st Street
Chicago, IL 60609

24/7 Transportation Emergencies
Call CHEMTREC: 800-424-9300
Account No.: CCN223

For More Information Call:
773-254-5222
(Monday - Friday 8:00-4:30)

2. HAZARD IDENTIFICATION

IF CONTACT WITH SKIN (or hair): Remove all contaminated clothing immediately and rinse skin with water/shower for at least 20 minutes.

GHS Ratings:

Skin corrosive	1A	Destruction of dermal tissue: Exposure < 3 min. Observation < 1 hour, visible necrosis in at least one animal
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5

GHS Hazards

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

GHS Precautions

P260	Do not breathe dust/fume/gas/mist/vapors/spray
P264	Wash hands thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P310	Immediately call a POISON CENTER or doctor/physician if exposed
P321	Specific treatment (see ... on this label)
P363	Wash contaminated clothing before reuse
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

	breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P405	Store locked up

Signal Word: Danger

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS number	Weight Concentration %
Di-Water	7732-18-5	80.20%
Nitric acid	7697-37-2	19.80%

4. FIRST-AID MEASURES

INHALATION: Move exposed party to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

EYE CONTACT: In case of eye contact, rinse with plenty of water for at least 20 minutes and seek medical attention immediately.

SKIN CONTACT: Immediately flush with plenty of water for at least 20 minutes while removing contaminated clothing. Get medical attention immediately.

INGESTION: Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Flash Point: None

LEL: UEL:

FLAMMABLE LIMITS: Product is not flammable. However, contact with metal may release flammable hydrogen gas

EXTINGUISHING MEDIA: Use an extinguishing agent suitable for the fire and other materials present that are exposed to fire.

FIRE AND EXPLOSION HAZARD: Use water spray to cool unopened containers if necessary to prevent BLEVE (Boiling Liquid Expanding Vapor Explosion).

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions toxic fumes should be anticipated.
FIRE FIGHTING: See also Stability and Reactivity section.

FIRE EQUIPMENT: Wear self-contained, approved breathing apparatus and full protective clothing (including eye protection and boots).

6. ACCIDENTAL RELEASE MEASURES

SPILL/LEAK: Follow your companies established procedures for reporting and/or responding to chemical incidents. No action shall be taken involving any personal risk without suitable training and use of appropriate personal protective equipment.

See section 8 for recommendations on the use of personal protective equipment.

SMALL SPILL: Stop leak if it can be done without risk. Be sure to utilize appropriate personal protective equipment. Clean up spilled material with noncombustible absorbent material, then place in a suitable container for disposal in accordance with Federal, state, and local requirements. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with Federal, state, and local regulations.

LARGE SPILL: No action shall be taken involving any personal risk or without suitable training, and use of appropriate personal protective equipment. Stop leak if it can be done without risk. Prevent spillage from entering drains and/or waterways. Any release to the environment may be subject to Federal, state, and local reporting requirements.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, or processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. Use with adequate ventilation. Avoid formation of aerosol mixtures involving the product.

See section 8 for recommendations on the use of appropriate personal protective equipment.

STORAGE: Keep container closed when not in use. Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Protect from excessive heat and/or freezing.

REGULATORY: Do not store in unlabeled containers. Adhere to precautionary warnings on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5	Not Established	Not Established	Not Established
Nitric acid 7697-37-2	2 ppm TWA; 5 mg/m3 TWA	4 ppm STEL 2 ppm TWA	NIOSH: 2 ppm TWA; 5 mg/m3 TWA 4 ppm STEL; 10 mg/m3 STEL

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

VENTILATION: Use only with adequate ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions present. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

ADMINISTRATIVE CONTROLS: No action shall be taken involving any personal risk or without suitable training and issuance of appropriate personal protective equipment.

PROTECTIVE GEAR:

Eye protection: Wear safety goggles if eye contact with material is possible (face shield recommended if splashing is possible).

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is appropriate. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: If needed, use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

CONTAMINATED GEAR: Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot, or as a specification for the product.

Specific Gravity (SG):	**1.075 (approximate)**
Appearance:	**Clear colorless liquid**
Odor:	**Slight acidic odor**

10. STABILITY AND REACTIVITY

Product is normally STABLE under normal conditions of storage and handling.

INCOMPATIBLE MATERIALS:
Cyanides, organic and oxidizing materials, strong alkalis

HAZARDOUS DECOMPOSITION:
Nitrogen oxides

HAZARDOUS POLYMERIZATION:
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Mixture Toxicity
Inhalation Toxicity LC50: 225mg/L

Component Toxicity
7697-37-2 Nitric acid
Inhalation LC50: 67 ppm (Rat)

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

TARGET ORGANS:
Eyes Skin Respiratory System

Effects of Overexposure
CARCINOGENICITY: The following chemicals comprise 0.1 % or more of this mixture and are listed and/or classified as carcinogens or potential
carcinogens by NPT, IARC, OSHA (mandatory listing), or ACGIH (optional listing).

CAS Number	Description	% Weight	Carcinogen Rating
None			No Data Available

ACUTE TOXICITY: Potential severe inhalation irritant – severe eye damage potential – sever skin irritant

CHRONIC EFFECTS: None known

12. ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials (if any).

Component Ecotoxicity: None known

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it may meet the criteria of a hazardous waste as defined in 40 CFR 261 as a minimum of a D002 material, defined as a Waste Corrosive material [pH ≤ 2 or ≥ 12.5, or corrosive to steel]. Other waste codes may apply. Waste material should only be sent to an appropriately permitted RCRA facility.

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Dispose of in accordance with Federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

Important Note: The data provided in this section is for information purposes only. Please consult the appropriate regulations to properly classify your shipment for transportation, as shipping descriptions may vary based upon mode of transport, quantities, package size, and/or origin/destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

For small quantities packed in combination packaging, exceptions may apply.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
PHMSA	Nitric Acid	UN2031	PG II	8

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:
The following chemicals are reportable under Pennsylvania Right to Know:

7697-37-2 Nitric acid

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

- None

SARA313

- None

Country	Regulation	All Components Listed
U.S.A.	TSCA	Yes

United States inventory (TSCA 8b): All components are listed or exempted.

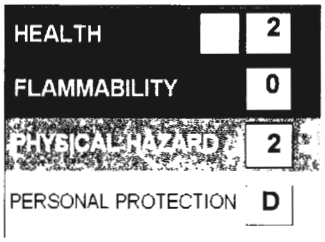
- None

SARA 313 Components: The following listed components (if any) are subject to the Supplier Notification Requirement found in 40 CFR 372.45 (c 4); a part of Title III of the Superfund Amendments and Reauthorization Act of 1986.

7697-37-2 Nitric acid 20 - 30%

16. OTHER INFORMATION

Hazardous Material Information System (HMIS)

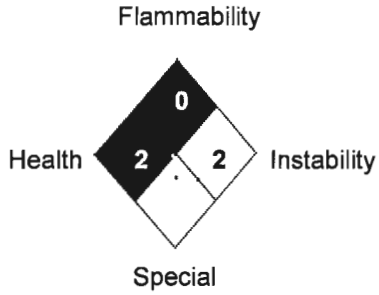


HMIS & NFPA Hazard Rating

Legend
*** = Chronic Health Hazard**

0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH
4 = SEVERE

National Fire Protection Association (NFPA)



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Date Prepared: 9/14/2015