U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

APR 2 2009

Mr. Gene Sanders, DGSA
Senior Dangerous Good Transportation Specialist
Thermo Fisher Scientific
2000 Park Lane
Pittsburgh, PA 15275

Ref. No. 09-0056

Dear Mr. Sanders:

This responds to your March 13, 2009 email requesting clarification of the classification and description of a product under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request confirmation that you appropriately class and describe a solution of 99.9% acetone and 0.1% picric acid (trinitrophenol) as "UN1090, Acetone solution, 3, II" and whether the product is eligible for limited quantity exceptions.

Under § 173.22, it is the shipper's responsibility to class and describe a hazardous material. This Office does not normally perform this function. Picric acid (UN0154) is explosive when dry and requires approval from the Associate Administration prior to transport of the material. However, it is the opinion of this Office that a 0.1% concentration of picric acid is sufficiently diluted in solution so that the solution is not regulated as a Class 1 explosive or as a Class 3 desensitized explosive liquid. Therefore, "UN1090, Acetone, 3, II" is appropriate to describe the product and the product would be eligible for limited quantity exceptions under § 173.150. We note that the qualifying word "solution" must not be added to the proper shipping name. For purposes of the HMR, use of the qualifying word applies to a solution comprised of a hazardous material identified in the § 172.101 Hazardous Materials Table (HMT) and a non-hazardous material.

I hope this information is helpful. If you have further questions, please do not hesitate to contact this Office.

Sincerely,

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Der Kinderen
§172.101
§173.150.
Classification
09-0056

Drakeford, Carolyn <PHMSA>

From: Gorsky, Susan <PHMSA>
Sent: Friday, March 13, 2009 10:14 AM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: Classification review requested.
Attachments: R58611000msds.pdf

Dr. Watson and Ms. Gorsky,

Thermo Fisher Scientific has a product from a supplier in one of our warehouses that we'd like to re-ship to a customer. Since re-shippers are independently responsible for compliance with the HMR, we are requesting your review of our classification of this product.

The product, supplied by Ricca Chemical Company (MSDS attached, Thermo Fisher # NC9822307, Ricca # R58611000), has 0.1% of Picric Acid (Trinitrophenol), in 99.9% Acetone. Based upon the HazMat Table Trinitrophenol entries, and upon a number of existing interpretations that indicate Picric Acid at this concentration has been adequately desensitized in a variety of solvents, we believe the Picric Acid in this product has also been desensitized So, we propose using a classification of UN1090, Acetone Solution, 3, II. And if packaged and marked properly, we believe 500 mL of this product would be eligible for the Limited Quantity relief granted in the 49CFR 173.150(b) exception.

Do you agree with these conclusions? Thank you.

Cheers,

Gene Sanders, DGSA
Senior Dangerous Goods Transportation Specialist
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Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Catalog Number: R5861100	
Product Identity: PICRIC ACID-ACETONE, for Brown & Brinn	
Manufacturer's Name: RICCA CHEMICAL COMPANY LLC	**Emergency Contact(24 hr) -- CHEMTREC®** Domestic: 800-424-9300 International: 703-527-3887
CAGE Code: 4TCW6, 0V553, 4XZQ2	
Address: 448 West Fork Dr Arlington, TX 76012	**Telephone Number For Information:** 817-461-5601
Date Prepared: 10/25/06	**Revision:** 0 Last Revised: 10/25/2006 Date Printed: 03/12/2009 2:12:19 pm

Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
Acetone	67-64-1	app. 99.9%	500 ppm 1188 mg/m3	1000 ppm 2400 mg/m3
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	app 0.1%	Not Available 0.1 mg/m3	Not Available 0.1 mg/m3

Section 3: Hazard Identification

Emergency Overview: Flammable liquid. Harmful if swallowed or inhaled. If ingested, vomiting may occur spontaneously, but do not induce. Call a physician immediately. Causes irritation to the eyes, skin and respiratory tract. Wash areas of contact with water. May affect central nervous system. Picric Acid may detonate if allowed to dry completely.

Target Organs: eyes, skin, liver, blood, respiratory system, central nervous system.

Eye Contact: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

Inhalation: Inhalation of vapors irritates the respiratory tract. May cause coughing, dizziness and headache. Exposure to high concentrations can cause depression of the central nervous system with symptoms of sleepiness and lack of concentration.

Skin Contact: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

Ingestion: Swallowing small amounts are not likely to produce harmful effects. Ingestion of larger amounts may produce abdominal pain, nausea and vomiting. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms are expected to parallel inhalation.

Chronic Effects/Carcinogenicity: None

IARC - No.

NTP - No.

OSHA - No.

Reproductive Information: Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Acetone.
Teratology (Birth Defect) Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Picric Acid (2,4,6-Trinitrophenol). Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Acetone.

Section 4: First Aid Measures - In all cases, seek qualified evaluation.

Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Call a physician immediately.
Skin Contact: Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops.
Ingestion: Aspiration hazard. Do not induce vomiting, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician.

Section 5: Fire Fighting Measures

Flash Point: -18 C
Method Used: CC
LFL: 2.5%
UFL: 12.8%
Extinguishing Media: Water, dry chemical, foam, or carbon dioxide. Water spray may be used to keep fire-exposed containers cool.
Fire & Explosion Hazards: Vapors may produce flash fires. Vapors can flow along surfaces to distant ignition source and flash back. Explosion hazard when exposed to heat, flame or oxidizers.
Fire Fighting Instructions: Poisonous gases are produced in fire. Continue to cool containers with water after fire is extinguished. For larger fires, use unmanned hose apparatus, if possible. Consider down wind conditions. Do not release runoff from fire-fighting measures to sewers or waterways.
Fire Fighting Equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Remove all sources of ignition. Contain spill. Absorb in suitable material (vermiculite, dry sand, etc.) for disposal in a RCRA approved waste disposal facility. Ventilate area of spill. Do not flush to sewer.

Section 7. Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues. Use non-sparking tools and equipment.
Safety Storage Code: Flammable

Section 8: Exposure Control/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.
Respiratory Protection: If the TLV is exceeded, a half-mask organic vapor respirator may be worn for up to 10 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full facepiece organic vapor respirator may be worn for up to 50 times the exposure limit, or the maximum use concentration specified by the respirator supplier, whichever is lowest.
Skin Protection: Chemical resistant gloves.
Eye Protection: Safety glasses or goggles.

Section 9: Physical and Chemical Properties

Appearance: Clear, yellow colored liquid
Odor: characteristic acetone odor
Solubility in Water: Infinite
Specific Gravity: Approximately 0.79
pH: Not Available.
Boiling Point(°C): Approximately 56
Melting Point(°C): Approximately -94
Vapor Pressure: 180 at 20oC (Acetone)

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.Very unstable if allowed to dry completely.

Incompatibility: Oxidizers, Nitric Acid-Sulfuric Aid mixtures, Acids, Chromium Trioxide, Sulfuric Acid-Potassium Dichromate, Hydrogen Peroxide, Chloroform and a base, Sodium Hypobromate, heat, sparks, open flame.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

LD50, Oral, Rat: (Acetone) 5800 mg/kg, behavioral affects noted; (Picric Acid) 200 mg/kg, behavioral and sense organ (eye) effects noted.

Section 12. Ecological Information

Ecotoxicological Information: Acetone has slight acute and chronic toxicity to aquatic life.
Chemical Fate Information: Approximately 50% of Acetone will eventually end up in the air; the rest will end up in later. When released into the soil, this material is expected to readily biodegrade.

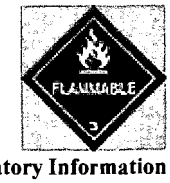
Section 13. Disposal Considerations

Absorb liquid with suitable material. Containerize for proper disposal in an approved RCRA waste facility for burning with an incinerator having an afterburner and scrubber. Always dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

Part Numbers: R5861100-4A

D.O.T. Shipping Name: Acetone Solution
D.O.T. Hazard Class: 3
U.N. / N.A. Number: UN1090
Packing Group: II
D.O.T. Label: 3



Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

OSHA Status: These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.
TSCA Status: All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

Sara Title III:

Section 302 Extremely Hazardous Substances: Not Applicable.
Section 311/312 Hazardous Catagories: Acute, Fire: Yes Chronic, Pressure, Reactivity: No
Section 313 Toxic Chemicals: Not Applicable.

California: None Reported.
Pennsylvania: Picric Acid (2,4,6-Trinitrophenol) is listed as an Environmental Hazard on the state's Hazardous Substances List. Acetone is listed as an Environmental Hazard on the state's Hazardous Substances List.
RCRA Status: U002
CERCLA Reportable Quantity: Acetone - 5,000 pounds.

WHMIS: B-2: Flammable and Combustible Material. Flammable Liquid. D-2B: Poisonous and Infectious Material. Materials causing other toxic effects - Toxic Material.

Section 16. Other Information

NFPA Ratings:

Health: 1	Flammability: 3	Reactivity: 0	Special Notice Key:None

HMIS Ratings:

Health: 1	Flammability: 3	Reactivity: 0	Protective Equipment:B (Protective Eyewear, Gloves)

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.