

Burdick & Jackson

Material Safety Data Sheet

0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 0.1% Trifluoroacetic Acid in 95/5 Water/ Acetonitrile v/v/v

OTHER/GENERIC NAMES: None

PRODUCT USE: Laboratory and Research and Development

MANUFACTURER: Honeywell, Burdick & Jackson
1953 South Harvey Street
Muskegon, MI 49442

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm Eastern Time)
1-800-368-0050

IN CASE OF EMERGENCY CALL:
(24 Hours/Day, 7 Days/Week)
1-800-498-5701 (health emergencies only)
602-365-4980 (Honeywell - International)
For Transportation Emergencies:
1-800-424-9300 (CHEMTREC - Domestic)
703-527-3887 (CHEMTREC - International)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Water	7732-18-5	95.9
Acetonitrile	75-05-8	4.0
Trifluoroacetic Acid	76-05-1	0.1

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Toxic liquid. May release toxic cyanide vapor when heated. Clear colorless liquid with sweet, ether-like odor. Liquid and vapor contact causes irritation to the eyes, skin and respiratory tract. Can cause convulsions. Ingestion can cause fatal cyanide poisoning.

POTENTIAL HEALTH HAZARDS

SKIN: May be absorbed through the skin producing effects similar to those described for inhalation.

Burdick & Jackson

MATERIAL SAFETY DATA SHEET

0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

EYES: May cause severe irritation with redness and pain. Corneal damage may occur and is usually reversible.

INHALATION: Causes respiratory tract irritation. High concentrations can cause headache, nausea, vomiting, respiratory depression, weakness, irregular heart beat, abdominal pain, convulsions, shock, unconsciousness and death depending on concentration and length of exposure.

INGESTION: May cause gastric system irritation and symptoms similar to those described for inhalation.

DELAYED EFFECTS: Chronic exposure may cause liver, kidney and central nervous system damage.

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section.			

4. FIRST AID MEASURES

SKIN: Immediately rinse affected area with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder contaminated clothing before reuse.

EYES: Immediately flush with water, continuing for at least 15 minutes. Get immediate medical attention.

INHALATION: Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified operator is available. Get immediate medical attention.

INGESTION: If conscious, rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel.
Get immediate medical attention.

ADVICE TO PHYSICIAN: Acetonitrile is slowly metabolized to cyanide. Patients with significant exposures should be observed for signs of cyanide poisoning and treated accordingly.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 134°F (56°C)

FLASH POINT METHOD: TAG Closed Cup

AUTOIGNITION TEMPERATURE: Not determined

UPPER FLAMMABLE LIMIT (volume % in air): 16% (Acetonitrile)

LOWER FLAMMABLE LIMIT (volume % in air): 3% (Acetonitrile)

FLAME PROPAGATION RATE (solids): Not Applicable

OSHA FLAMMABILITY CLASS: Not Applicable

EXTINGUISHING MEDIA:

Burdick & Jackson

MATERIAL SAFETY DATA SHEET

0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

Dry chemical, carbon dioxide, or alcohol resistant foam: Water spray best suited for cooling down containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Dangerous fire hazard when exposed to heat or flame. Under fire conditions may emits toxic fumes and vapors. Sealed containers may pressurize and/or rupture when heated. Above the flash point, flammabl vapor/air mixtures maybe formed. Vapors are heavier than air and danger of flashback exists.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Wear full protective clothing and NIOSH approved self-contained breathing apparatus with full facepiece. Fire may produce toxic (cyanide) and flammable fumes and vapors. Do not allow runoff from fire fighting efforts to enter sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Eliminate sources of ignition. Isolate the spill area. Use non-sparking tools and equipment. Stop leak in a safe and practical manner. Contain and recover liquid when possible. Absorb small spills with inert, non-combustible material and place in an approved chemical waste container. Dike large spills with inert noncombustible material and transfer liquid into an approved chemical waste disposal container. Do not allow spilled material to enter into sewers or waterways. Disperse vapors with water spray.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Use with adequate explosion proof ventilation. Use non-sparking tools and ground containers during transfers to avoid static sparks. Keep away from heat, sparks and flame. Do not breathe vapors. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke in the work area. Thoroughly wash after handling.

STORAGE RECOMMENDATIONS:

Store the product in a cool, dry, well ventilated area suitable for flammable liquids. (OSHA 29 CFR 1910.106) Protect the product from temperature extremes and sunlight. Store away from incompatible substances and in accordance with 29 CFR 1910.106. Avoid acids, bases, oxidizers, explosives, nitrogen-fluorine compounds, sulfites, perchlorates, reducing agents and plastics. Protect containers from physical damage. Empty containers may be hazardous as they contain residual product and/or fumes and vapors. Observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide adequate properly rated general room ventilation. Provide local exhaust ventilation systems or preferably closed handling systems at all transfer and handling points.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Burdick & Jackson

MATERIAL SAFETY DATA SHEET 0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

Wear chemically protective gloves, boots and apron, as appropriate to prevent skin contact. Showering after work is recommended.

EYE PROTECTION:

Wear protective eyeglasses or chemical safety goggles as needed. Use a full-face shield if liquid contact is possible. Refer to OSHA eye and face-protection regulations (29 CFR 1910.133).

RESPIRATORY PROTECTION:

Not required for properly ventilated areas. If there is potential for inhalation of vapor or mist, ventilation and other forms of engineering controls are the preferred means of controlling exposures. Respiratory protection may be appropriate for non-routine or emergency events, if so use an appropriate NIOSH approved respirator. The respirator must be selected based on contamination levels and use conditions found in the workplace. Use conditions must not exceed the working limits of the respirator. The respirator must be approved by the National Institute for Occupational Safety and Health (NIOSH) and used in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134.

ADDITIONAL RECOMMENDATIONS:

Safety showers and eyewash stations should be convenient to the work area. Wear protective clothing, boots, faceshield and hat, cleaned daily, if exposure to liquid (splashing etc.) is possible. Separate contaminated work clothes from street clothes. Launder contaminated clothing before reuse.

EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA Z-1 PEL</u>	<u>NIOSH</u>
Acetonitrile	20 ppm TWA (Skin)*	40 ppm	REL: 20 ppm. IDLH: 500 ppm

* Skin designation: Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA Z-1 PEL</u>	<u>NIOSH</u>
Hydrogen Cyanide	4.7 ppm ceiling (skin)*	10 ppm (skin) 11 mg/m ³	REL: 4.7 ppm STEL (skin). REL: 5 mg/m ³ . IDLH: 50 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, Colorless
PHYSICAL STATE:	Liquid
MOLECULAR WEIGHT:	Not applicable
CHEMICAL FORMULA:	Mixture
ODOR:	Sweet ether like odor
SPECIFIC GRAVITY (water = 1.0):	0.9916 @ 25°C
SOLUBILITY IN WATER (weight %):	Not determined
pH:	2.05

Burdick & Jackson

MATERIAL SAFETY DATA SHEET

0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

BOILING POINT:	188°F (87°C)	
MELTING POINT:	Not determined	
VAPOR PRESSURE:	Not determined	
VAPOR DENSITY (air = 1.0):	Not determined	
EVAPORATION RATE:	5 (Acetonitrile)	COMPARED TO: Butyl Acetate = 1
% VOLATILES:	5	
FLASH POINT:	134°F (56°C)	

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

STABILITY (CONDITIONS TO AVOID):

Acetonitrile is stable at room temperature in closed containers under normal storage and handling conditions. Avoid heat, ignition sources, and incompatible materials.

INCOMPATIBILITIES:

Acids, bases, oxidizers, explosives, nitrogen-fluorine compounds, sulfites, perchlorates, reducing agents; Some forms of plastic, rubber and coatings are attacked.

CONDITIONS TO AVOID:

Heat, flames, ignition sources and incompatible material

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition can produce toxic fumes of hydrogen cyanide and oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION:

Will not occur

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

No data available for the mixture

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

No data available for the mixture

OTHER DATA:

No data available for the mixture

Burdick & Jackson

MATERIAL SAFETY DATA SHEET 0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

12. ECOLOGICAL INFORMATION

No data available for the mixture; do not release to the environment.

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Yes, solution may be a characteristic waste.

If yes, the RCRA ID number (USEPA Hazardous Waste Code) is: U003 (acetonitrile component)

OTHER DISPOSAL CONSIDERATIONS:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved RCRA waste facility. Dispose of container and unused contents in accordance with all applicable local, state, and federal regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

Proper DOT Shipping Description: Not regulated for transportation

Reportable Quantity (RQ): Acetonitrile = 5000 lbs (2270 kg).

Label(s) Required: Not applicable

Emergency Response Guidebook (2004 Edition): Not applicable

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: The components of this mixture are listed on the TSCA inventory

Burdick & Jackson

MATERIAL SAFETY DATA SHEET 0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

OTHER TSCA ISSUES: Acetonitrile:
 TSCA Section 4(a) Final Test Rules & Testing consent Orders
 TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR) (40 CFR 712, Subpt. B)
 TSCA Section 8(a) Inventory Update Rule (IUR): Subject to a Special Regulatory Action under TSCA (2002 EPA Instructions, App. B)
 TSCA Section 8(d) Health & Safety Data Reporting (40 CFR 716, Subpt. B)
 TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) (revised, effective January 16, 2007)
 TSCA High Production Volume (HPV) Chemicals: 1990, 1994 & Post-1994 Additions (01/20/06)

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPQ (lb)</u>
Acetonitrile	5000	None

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate. Delayed. Fire.

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
Acetonitrile	de Minimis concentration is 1.0%.

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
No ingredients in this section		

ADDITIONAL REGULATORY INFORMATION:

None

WHMIS CLASSIFICATION (CANADA):

This product has not been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Burdick & Jackson

MATERIAL SAFETY DATA SHEET

0.1% Trifluoroacetic Acid in 95/5 Water/Acetonitrile v/v/v

FOREIGN INVENTORY STATUS:

All of the components of this product are listed on the following foreign inventories: Australia, Canada, China, the European Union, Japan, Korea and the Philippines.

16. OTHER INFORMATION

CURRENT ISSUE DATE: January 15, 2007

PREVIOUS ISSUE DATE: None

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

New MSDS

OTHER INFORMATION: