Nitrile Acid

16500

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

**MSDS Name:** Nitrile Acid

**Company Identification:** 3M Health Care

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

**CAS#** | **Chemical Name** | **%**
--- | --- | ---
7697-37-2 | Nitrile acid | 68-70
7732-19-5 | Water | 29.3%

**Hazard Symbols:** C, O

**Risk Phrases:** 38 B

**** SECTION 3 - HAZARDS IDENTIFICATION ****

**EMERGENCY OVERVIEW**

Appearance: clear to yellow

Dampness: Strong corrosive. Contact with other material may cause a fire. Corrosive. Causes eye and skin burns. May cause severe respiratory irritation and irritation with possible burns. May cause severe digestive tract irritation with possible burns.

Target Organ: No data found.

**Potential Health Effects**

Eye: Causes severe eye burns. May cause irreversible eye injury. May cause chemical conjunctivitis and corneal damage.

Skin: Causes skin burns. May cause deep, penetrating ulcers of the skin. May cause severe rash, in mild cases, and cold and clammy skin with bluish or pale color.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract irritation. May cause perforation of the digestive tract. May cause systemic effects.

Inhalation: Effects may be delayed. Causes chemical burns to the respiratory tract. Contact, inhalation may be fatal as a result of asphyxiation, inflammation, edema, aspiration may lead to pulmonary edema. May cause acute and chronic lung injury, pulmonary edema, bronchitis, chemical pneumonitis and pulmonary edema. May cause damage to the respiratory tract. May cause asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

Chronic: Repeated inhalation may cause chronic bronchitis. Repeated exposure may cause emphysema of the lungs. Effects may be delayed.

**** SECTION 4 - FIRST AID MEASURES ****

**Eye:**

Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes open. Eye irrigation is required. (Eye flush for at least 15 minutes.)

**Skin:**

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated clothing.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or other liquid and water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation if breathing has ceased apply artificial respiration. Start CPR. Using oxygen and a suitable mechanical device such as a bag and a mask, oxygen should be given.

Notes to Physician:

Treat symptomatically and medically.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

**General Information:**

Avoid breathing airborne particles during fire. Use water spray to keep fire-exposed containers cool. In case of a fire, use water to extinguish surrounding fire. Contact professional fire-fighters immediately.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

**General Information:**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container and avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills using proper procedures as described in the precautionary statement. Neutralize spill with sodium bicarbonate. Remove all sources of ignition. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

**** SECTION 7 - HANDLING AND STORAGE ****

**Handling:**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Do not breathe the vapor or mist. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation.

**Storage:**

Keep away from heat, sparks, and flame. Do not store near combustible materials. Keep container closed when not in use. Store substances in dry, well-ventilated area away from incompatible materials.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

**Engineering Controls:**

When storing or utilizing this material, an eyewash facility and a safety shower should be available to ventilate operations to keep airborne concentrations low.

**OSHA Vacated PELs:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile Acid</td>
<td>2 ppm</td>
<td>4 ppm</td>
<td>STEL</td>
</tr>
<tr>
<td>2 ppm</td>
<td>5 ppm</td>
<td>TWA</td>
<td>25</td>
</tr>
<tr>
<td>3 ppm</td>
<td>5 ppm</td>
<td>TWA</td>
<td>25</td>
</tr>
<tr>
<td>none listed</td>
<td>5 mg/m3</td>
<td>TWA</td>
<td>25</td>
</tr>
</tbody>
</table>

**OSHA Final PELs:**

**Emergency Eye Protection:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin Protection:**

Wear appropriate gloves to prevent skin exposure.
Clothing: Wear a chemical apron. Wear appropriate clothing to prevent skin exposure.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece air respirator in the positive pressure mode with emergency escape provisions.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Liquid

Appearance: Clear to yellow

Odor: Strong odor - acrid odor

PH: 1.0

Vapor Pressure: 6.8 mm Hg

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 186.6 deg F

Freezing/Melting Point: -43.6 deg F

Autoignition Temperature: Not available.

Flash Point: Not available.

NFPA Rating: Not available.

Explosion Limits: Lower: Not available. Upper: Not available.

Decomposition Temperature: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: 1.96

Molecular Formula: HNO3

Molecular Weight: 63.0119

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable. Decomposes when in contact with air, light, or organic matter.

Conditions to Avoid: High temperature, incompatible materials, ignition sources, dust generation.

Incompatibility with Other Materials: Strong oxidizing agents.

Inflammability: Slight explosive hazards.

Hazardous Decomposition Products:
- Nitrogen oxides.

Hazardous Polynuclear Aromatic Compounds: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTSCA:
- CAS# 7697-37-2; CMT755500 Q0590000
- CAS# 7732-18-5; EC2110000

LD50/LC50/NOEL: Not available.

Carcinogenicity:
- Nitric acid: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Water:
- Not listed by ACGIH, NIOSH, NTP, or OSHA.

Epidemiology:
- No information found.

Teratogenicity:
- No information found.

Reproductive Effects:
- No information found.

Neurotoxicity:
- No information found.

Mutagenicity:
- No information found.

Other Studies/Tests:
- See actual entry in RTSC for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Other:
- For more information, see "HANDBOOK OF ENVIRONMENTAL RISK AND EXPOSURE DATA."

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Disposal of in a manner consistent with federal, state, and local regulations. RCRA P-Series: None listed.

RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT:
- Shipping Name: NITRIC ACID
- Hazard Class: 8
- UN Number: UN3221
- Packing Group: II

Canadian TDR:
- Shipping Name: NITRIC ACID
- Hazard Class: 8 (9.2)
- UN Number: UN3221

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
- TSCA: CAS# 7697-37-2 is listed on the TSCA inventory.
- CAS# 7732-18-5 is listed on the TSCA inventory.
- Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.
- Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.
- Section 120: None of the chemicals are listed under TSCA Section 120.
- Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.
- SARA: Section 302 (FO): 851000 Pounds (386 kg) / Section 302 (TFO): 851000 Pounds (386 kg)
- SARA Water: 851000 Pounds (386 kg)
- Section 313: This material contains Nitric acid (CAS# 7697-37-2, 8578-01-6), which is subject to the reporting requirements of Section 313 of SARA Title III.

Clean Air Act:
- This material does not contain any hazardous air pollutants.

Clean Water Act:
- None of the chemicals in this product are listed as a Hazardous Substance under the CWA.

OSHA:
- CAS# 7697-37-2 is considered highly hazardous by OSHA.

STATE:
- Nitric acid can be found on the following state right to know lists:
  - California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts
  - Water is not present on state lists from CA, PA, MN, MA, FL or NC.

European/International Regulations:
- European Labeling in Accordance with EC Directives Hazard Symbols: C C
- Risk Phrases: R35 Causes severe burns.
- S36/37/39 Wear suitable protective clothing and gloves.
- S45 In case of contact or if you feel unwell, seek medical advice immediately (show the label where possible).

WKE (Water Danger/Protection):
- CAS# 7697-37-2: 1
- CAS# 7732-18-5: 1

United Kingdom Occupational Exposure Limits:
- CAS# 7697-37-2: OEB-United Kingdom, STEL 4 ppm STEL; 10 mg/m3 STEL.
- CAS# 7697-37-2: OEB-United Kingdom, STEL 4 ppm STEL; 10 mg/m3 STEL.
**Canada**

CAS # 7697-37-2 is listed on Canada's DSL/HSCL List.

CAS # 7712-18-5 is listed on Canada's DSL/HSCL List.

This product has a WMDIS Classification of C, D, E, H.

CAS # 7697-37-2 is not listed on Canada's Ingredient Disclosure List.

CAS # 7712-18-5 is not listed on Canada's Ingredient Disclosure List.

**Exposure Limits**

CAS # 7697-37-2: OEL-ARAB Republic of Egypt; TWA 2 ppm (5 mg/m³)

OEL-AUSTRALIA; TWA 2 ppm (5 mg/m³); STEL 4 ppm (10 mg/m³)

OEL-BELGIUM; TWA 2 ppm (5.2 mg/m³); STEL 4 ppm (10 mg/m³)

OEL-CZECHOSLOVAKIA; TWA 2.5 mg/m³; STEL 2.5 mg/m³

OEL-DENMARK; TWA 2 ppm (5 mg/m³)

OEL-FINLAND; TWA 2 ppm (5 mg/m³); STEL 5 ppm (13 mg/m³); Skin

OEL-FRANCE; TWA 2 ppm (5 mg/m³); STEL 4 ppm (10 mg/m³)

OEL-GERMANY; TWA 2 ppm (5 mg/m³)

OEL-HUNGARY; STEL 2 mg/m³

OEL-JAPAN; TWA 2 ppm (5.2 mg/m³)

OEL-THE PHILIPPINES; TWA 2 ppm (5 mg/m³)

OEL-RUSSIA; TWA 2 ppm; STEL 2 mg/m³; Skin

OEL-SWEDEN; TWA 2 ppm (5 mg/m³); STEL 5 ppm (13 mg/m³)

OEL-SWITZERLAND; TWA 2 ppm (5 mg/m³); STEL 4 ppm (1 mg/m³)

OEL-TAIWAN; TWA 2 ppm (5 mg/m³)

OEL-TURKEY; TWA 2 ppm (5 mg/m³)

OEL-UNITED KINGDOM; TWA 2 ppm (5 mg/m³); STEL 4 ppm (10 mg/m³)

OEL IN POLAND, COLOMBIA, JORDAN, KOREA check ACSH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACSH TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 9/30/1998  Revision #5 Date: 4/30/2000

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claim, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if the company has been advised of the possibility of such damages.