C&G Containers Scientific
"The Total Package!"
Office 337.237.7123 Toll Free 800.396.7123 Fax 337.237.8712

Material Safety Data Sheet

Nitric Acid 18.8-19.6% Solution – Metals Preservation (Air transport)

Section 1 - Chemical Product and Company Identification

MSDS Name: 18.8-19.6 Nitric Acid
Synonyms: Azotic Acid; Engravers Nitrate; Aqua fortis.
Company Identification: C & G Containers, Inc.
152 Easy Street
Lafayette, LA 70506

For information, call: (337) 237-7123
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7697-37-2	Nitric acid	28	231-714-2
7732-18-5	Water	72	231-791-2

Hazard Symbols: O C
Risk Phrases: 35 8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear to yellow liquid. **Danger!** Could be fatal if inhaled. Causes severe eye and skin burns. Causes severe respiratory and digestive burns. Strong Oxidizer. Contact with other materials may cause a fire. Acute pulmonary edema or

chronic obstructive lung disease may occur from inhalation of the vapors of Nitric Acid in any concentration. Corrosive to metal(s).

Target Organs: Eyes, skin, lungs, and mucous membranes.

Potential Health Effects

Eye: Causes severe eye burns. Direct contact with this material may cause blindness or permanent eye damage.

Skin: Causes skin burns. May cause deep, penetrating ulcers of the skin. Concentrated Nitric dyes human skin yellow with contact.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. May cause systemic effects.
Inhalation: Effects may be delayed. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. Dependent of the conditions, the vapor or fumes of Nitric Acid may actually be a mixture of Nitric Acid and various oxides of Nitrogen. The composition may vary with humidity, temperature and contact with other organic intrusion.
Chronic: Exposure to elevated concentrations of Nitric Acid may cause pneuomonitis and pulmonary edema which can be fatal. Symptoms can be delayed or immediate to exposure. Continued exposure to the vapor or its mist may result in a chronic bronchitis and chemical pneumontis. In addition, this chemical may erode teeth.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).
Skin: Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or 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 not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Notes to Physician: Treat symptomatically and supportively.

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Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other materials may cause a fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. May react with metal surfaces to form flammable and explosive hydrogen gas. Approach fore from an upwind position to avoid exposure.
Extinguishing Media: Use agent most appropriate to extinguish surrounding fire. Contact professional fire-fighters immediately.
Flash Point: Not applicable.
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 4; Flammability: 0; Instability: 0; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Neutralize spill with sodium bicarbonate powder. Provide ventilation. A vapor suppressing foam may be used to reduce vapors including water.

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 dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation. Discard contaminated shoes.
Storage: Keep away from heat, sparks, flame and direct sunlight. Do not store near combustible materials. Keep container closed when not in use. Keep away from metals. Store in a cool, dry, well-ventilated area away from incompatible substances. Bottles should be vented periodically in order to overcome pressure buildup.

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Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use in adequate exhaust ventilation areas to keep airborne concentrations low to the exposure limits recommended. Use only corrosion-resistant ventilation.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Nitric acid	2 ppm TWA; 4 ppm STEL	2 ppm TWA; 5 mg/m3 TWA 25 ppm IDLH	2 ppm TWA; 5 mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Nitric acid: 2 ppm TWA; 5 mg/m3 TWA; Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses, face shield or chemical safety goggles or a combination of.

Skin: Wear appropriate gloves to prevent skin exposure. I.e. Butyl rubber or heavy Nitrile

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

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator should exposure limits are exceeded or if an irritation or another symptom is experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear to yellow
Odor: strong odor - acrid odor
pH: 1.0 or less
Vapor Pressure: 51mm Hg @ 25°C
Vapor Density: 2.17 (air=1)
Evaporation Rate: Not available.
Viscosity: 0.761 cps @ 25°C
Boiling Point: 86° C
Freezing/Melting Point: -42° C
Decomposition Temperature: Not available.

Solubility: Soluble in water.
Specific Gravity / Density: 1.4
Molecular Formula: HNO3
Molecular Weight: 63.01

Section 10 - Stability and Reactivity

Chemical Stability: Stable. Decomposes when in contact with air, light, or organic matter. The yellow color is due to release of Nitrogen dioxide on exposed light.
Conditions to Avoid: High temperatures, light and confined spaces.
Incompatibilities with other Materials: Reducing agents, combustible materials, strong bases, acetic acid alcohols, aldehydes, cyanides, sulfides, metal powders, carbides, organic solvents Incompatible with many substances.
Hazardous Decomposition Products: Nitrogen oxides.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 7697-37-2: QU5775000; QU5900000
CAS# 7732-18-5: ZC0110000

7732-18-5:
Oral, rat: LD50 = >90 mL/kg;<BR.

LD50/LC50:
CAS# 7697-37-2:
Inhalation, rat: LC50 = 67 ppm(NO2)/4H;<BR.
Inhalation, rat: LC50 = 130 mg/m3/4H
Inhalation, rate, 260 mg/g/m3/30
Carcinogenicity:
CAS# 7697-37-2: Not listed by ACGIH, IARC, NIOSH, NTP, or CA Prop 65. CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or CA proposition 65

Epidemiology: No information found.
Teratogenicity: No information found.
Reproductive Effects: No information found.
Neurotoxicity: No information found.
Mutagenicity: No information found.
Other Studies: See actual entry in RTECS for complete information.

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Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: Terrestial: During transport through the soil, nitric acid will dissolve some of the soil material; in particular, the carbonate based materials. The acid will be neutralized to some degree with adsorption of the proton also occurring on clay materials. However, significant amounts of acid are expected to remain for transport down toward the ground water table. Upon reaching the ground water table, the acid will continue to move, now in the direction of the ground water flow.
Physical: No official information available
Other: No official information available

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	NITRIC ACID	NITRIC ACID
Hazard Class:	8	8
UN Number:	UN2031	UN2031
Packing Group:	II	II

Section 15 - Regulatory Information

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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 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA Section 302 Extremely Hazardous Substances
CAS# 7697-37-2 1000 LB TPQ
Section 302 (RQ)
CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)
Section 302 (TPQ)
CAS# 7697-37-2: TPQ = 1000 pounds; RQ = 1000 pounds
SARA Codes
CAS # 7697-37-2: acute, chronic, flammable.
Section 313
This material contains Nitric acid (CAS# 7697-37-2, 69 71%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

CERCLA Hazardous Substance and corresponding RQs

CAS # 7697-37-2: 1000 lbs final RQ; 454 kg final RQ
Clean Water Act:
CAS# 7697-37-2 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
CAS# 7697-37-2 is considered highly hazardous by OSHA.
STATE
CAS# 7697-37-2 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.
CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level: None of the chemicals in this product are listed.

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European / International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

O C

Risk Phrases:

R 35 Causes severe burns.
R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
S 36 Wear suitable protective clothing.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S23B Do not breathe fumes.

WGK (Water Danger / Protection)

CAS# 7697-37-2: 1
CAS# 7732-18-5: No information available.

Canada - DSL / NDSL

CAS# 7697-37-2 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of C, D1A, E.

Canadian Ingredient Disclosure List

CAS# 7697-37-2 is listed on the Canadian Ingredient Disclosure List.

MSDS Creation Date: 12/18/2001 From ThermFishSci
Revision #1 Date: 12-15-08