

Safety Data Sheet

Nitric Acid 70%

Section 1 - Chemical Product and Company Identification

SDS Name: Nitric Acid 70%

Catalog Numbers: SO-765

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H272-Oxidizing liquids: 3

H290-Corrosive to metals: 1

H314-Skin corrosion/irritation: 1A

H318-Serious eye damage/eye irritation: 1

H331-Acute toxicity, inhalation: 3

Consists of unknown acute oral toxicity.

Consists of unknown acute dermal toxicity.

Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

Hazard Statements:

H272-May intensify fire; oxidizer

H290-May be corrosive to metals

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H331-Toxic if inhaled

Precautionary Statements:

P210-Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

P220-Keep away from clothing and other combustible materials.

P234-Keep only in original packaging.

P260-Do not breathe dusts or mists.

P261-Avoid breathing dusts/fume/gas/mist/vapours/spray.

P264-Wash thoroughly after handling.

P271-Use only outdoors or in a well-ventilated area.

P280-Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340-If inhaled: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338-If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310-Immediately call a Poison Center/doctor.

P311-Call a Poison Center/doctor.

P363-Wash contaminated clothing before reuse.

P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam to extinguish.

P390-Absorb spillage to prevent material damage.

P403+P233-Store in a well-ventilated place. Keep container tightly closed.

P405-Store locked up.

P406-Store in a corrosion resistant container with a resistant inner liner.

P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7697-37-2	Nitric Acid	65-70
7732-18-5	Water	30-35

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get immediate medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Wash with soap and water. Remove contaminated clothing and shoes. Get immediate medical advice.

Oral Exposure: If ingested, rinse mouth with water, and after rinsing, drink water. Do NOT induce vomiting. Get immediate medical attention.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. Effects may be delayed.

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. During a fire, irritating gases may be generated by thermal decomposition or combustion. Contact with combustibles may cause extremely violent combustion. Can react with metals to release flammable hydrogen gas. May react explosively with combustible organics or readily oxidizable materials such as alcohols, turpentine, charcoal, organic refuse, metal powders, hydrogen sulfide, etc.

Extinguishing Media: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Nitrogen oxides, irritating and hazardous fumes and gases.

Flash Point: Not applicable

Autoignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 4; Flammability: 0; Instability: 1 OXIDIZING LIQUID.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

Methods for Cleaning up: Neutralize and then absorb with non-combustible material such as sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use only under a chemical fume hood. Use with adequate ventilation. Remove contaminated clothing and wash before re-use. Do not ingest or inhale. Do not get in eyes. Do not get on skin or clothing. Keep in a tightly closed and non-metal container. Store in a cool, dry, and well-ventilated area. Avoid contact with combustibles, organics, or any other oxidizable materials. Do not use with metal tools or containers. Protect from light, air, and moisture. Keep away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Nitric Acid CAS#7697-37-2	2 ppm TWA 4 ppm STEL	2 ppm TWA 5 mg/m ³ TWA 4 ppm STEL 10 mg/m ³ STEL 25 ppm IDLH	2 ppm TWA 5 mg/m ³ TWA

OSHA Vacated PELs: Nitric Acid: 2 ppm TWA; 5 mg/m³ TWA; 4 ppm STEL; 10 mg/m³ STEL

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear to light yellow

Odor: Strong acrid

Vapor Pressure: 48 mm Hg at 20°C (68°F)

Odor Threshold: Not available

Vapor Density: 2-3 (Air=1)

pH: 0.1 (1.0N solution)

Relative Density: 1.419 g/cc for 69-70% Nitric Acid Solution

Melting point/freezing point: -41°C (-41.8°F)

Solubility: Completely miscible in water

Boiling Point: ca. 101°C (ca. 214°F)

Flash Point: Not applicable

Evaporation Rate: Not available

Flammability (solid, gas): Not applicable

Partition coefficient: n-octanol/water: Not available

Autoignition Temperature: Not available

Decomposition Temperature: Not available

Viscosity: 2.0 cPs

Specific Gravity/Density: 1.40

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Reacts violently with oxidizers: Risk of fire/explosion.

Conditions to Avoid: Incompatible materials, ignition sources, and excess heat. Combustible material. May discolor on exposure to air or light.

Incompatibilities with Other Materials: Combustibles, flammables, strong bases, reducing agents, metals, metallic powders, organic materials, charcoal, aldehydes, alcohols, cyanides, ammonia, hydrocarbons, hydrogen sulfide, sulfides, acetic acid, acetone, aniline, carbides, chromic acid.

Hazardous Decomposition Products: Nitrogen oxides, irritating and hazardous fumes and gases.

Section 11 - Toxicological Information

CAS#7697-37-2 Nitric Acid: RTECS#: QU5775000

LD50 Oral: Not available

LD50 Dermal: Not available

LC50 Inhalation: 2.65 mg/L 4h (rat)

Investigated as a mutagen, reproductive effector.

Carcinogenicity: Nitric Acid CAS#7697-37-2 is not listed by NTP, ACGIH, OSHA, or California Prop. 65. Nitric Acid is listed by IARC (Group 1, Carcinogenic to Humans) for strong inorganic mists.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Ames test negative on Salmonella typhimurium (germ cell mutagenicity).

Specific Target Organ Toxicity, Single Exposure: Not available.

Specific Target Organ Toxicity, Repeated Exposure: Not available.

Symptoms associated with exposure:

Nitric acid (liquid, mist, vapor, aerosol) causes severe burns to all body tissue. Inhalation may cause coughing, choking, irritation and damage to the nose/throat/respiratory tract. Inhalation may cause pneumonia or pulmonary edema. Effects may be delayed. Inhalation may cause dental erosion. Ingestion may cause pain and burns of the mouth, throat, upper digestive and respiratory tracts. Ingestion may cause vomiting, diarrhea, swelling, risk of perforation, and lung damage. Skin contact may cause severe skin burns, pain, redness, blisters, scarring, and discoloration. Eye contact may cause severe and irreversible damage including blindness, redness, pain, and burns. Exposure may cause liver irregularities.

Strong inorganic mists are carcinogenic to humans causing larynx cancer and possibly lung cancer.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Harmful effect due to pH shift. Forms corrosive mixtures with water even when diluted. Hazardous to drinking water supplies.

CAS#7697-37-2 Nitric Acid:

LC50, freshwater fish: 100-330 mg/L 48h (asterias rubens)

LC50, freshwater fish: 72 mg/L 96h (gambusia affinis)(mosquito fish)

Persistence and degradability: Not available.

Bio-accumulative potential: Not available.

Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 - Transport Information

DOT

Proper shipping name: Nitric Acid

UN2031

PG II

Hazard class 8 (5.1)

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 1-22-04

Revision #1: RC 11/5/15

Revision #2: 9-20-18

Revision #3: 4-25-22

Revision #4: 8-20-24

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