

Safety Data Sheet

Nitric Acid 50% (v/v) High Purity

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nitric Acid 50% (v/v) High Purity

Synonyms/Generic Names: None

Product Number: 3697

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Hazard Not Otherwise Classified (HNOC): None

Signal Words: Danger

Pictograms:



GHS Classification:

| | |
|--------------------|-------------|
| Oxidizing liquid | Category 3 |
| Skin corrosion | Category 1A |
| Serious eye damage | Category 1 |

GHS Label Elements, including precautionary statements:

Hazard Statements:

| | |
|------|--|
| H272 | May intensify fire; oxidizer. |
| H314 | Causes severe skin burns and eye damage. |

Precautionary Statements:

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| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P220 | Keep/Store away from clothing and other combustible materials. |
| P221 | Take any precaution to avoid mixing with combustibles. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P264 | Wash hands thoroughly after handling. |

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| 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/physician. |
| P363 | Wash contaminated clothing before reuse. |
| P370+P378 | In case of fire: Use appropriate media to extinguish. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local regulations. |

Potential Health Effects

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| Eyes | Causes eye irritation. |
| Inhalation | May be harmful if inhaled. Causes respiratory tract irritation. |
| Skin | May be harmful if absorbed through skin. Causes skin irritation. |
| Ingestion | May be harmful if swallowed. |

NFPA Ratings

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|------------------------|-----|
| Health | 3 |
| Flammability | 0 |
| Reactivity | 1 |
| Specific hazard | N/A |

HMIS Ratings

| | |
|-------------------|---|
| Health | 3 |
| Fire | 0 |
| Reactivity | 1 |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Weight % | CAS # | EINECS# / ELINCS# | Formula | Molecular Weight |
|-------------|-----------|-----------|-------------------|------------------|------------------|
| Nitric Acid | 39.9-41.2 | 7697-37-2 | 231-714-2 | HNO ₃ | 63.01 g/mol |
| Water | Balance | 7732-18-5 | 231-791-2 | H ₂ O | 18.00 g/mol |

4. FIRST-AID MEASURES

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| Eyes | Rinse with plenty of water for at least 15 minutes and seek medical attention immediately. |
| Inhalation | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately. |
| Skin | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately. |
| Ingestion | Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately. |

5. FIRE-FIGHTING MEASURES

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| Suitable (and unsuitable) extinguishing media | Use dry chemical, carbon dioxide or alcohol-resistant foam to extinguish fire. Use appropriate media for adjacent fire. Cool unopened containers with water. |
| Special protective equipment and precautions for firefighters | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. |

Specific hazards arising from the chemical

Emits toxic fumes (nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | See section 8 for recommendations on the use of personal protective equipment. |
| Environmental precautions | Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements. |
| Methods and materials for containment and cleaning up | Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations. |

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

| Component | Exposure Limits | Basis | Entity |
|-------------|--------------------------------|-------|--------|
| Nitric Acid | 2 ppm 5.2 mg/m ³ | TLV | ACGIH |
| | 4 ppm 10 mg/m ³ | STEL | ACGIH |
| | 2 ppm 5 mg/m ³ | PEL | OSHA |
| | 2 ppm 5 mg/m ³ | REL | NIOSH |
| | 4 ppm 10 mg/m ³ | STEL | NIOSH |
| | 25 ppm | IDLH | NIOSH |

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

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| Eyes | Wear chemical safety glasses or goggles, and face shield. |
| Inhalation | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator. |
| Skin | Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| Other | Not Available |

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|-------------------|
| Appearance (physical state, color, etc.) | Colorless liquid. |
| Odor | Not Available |
| Odor threshold | Not Available |
| pH | Not Available |
| Melting point/freezing point | Not Available |
| Initial boiling point and boiling range | Not Available |
| Flash point | Not Flammable |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not Flammable |
| Upper/lower flammability or explosive limit | Not Explosive |
| Vapor pressure | Not Available |
| Vapor density | Not Available |
| Specific gravity | |
| Solubility (ies) | Soluble in water. |
| Partition coefficient: n-octanol/water | Not Available |
| Auto-ignition temperature | Not Available |
| Decomposition temperature | Not Available |

10. STABILITY AND REACTIVITY

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|---|--|
| Chemical Stability | Stable |
| Possibility of Hazardous Reactions | Will not occur. |
| Conditions to Avoid | May discolor on exposure to air and light. |
| Incompatible Materials | Alkali metals, organic materials, acetic anhydride, acetonitrile, alcohols, acrylonitrile. |
| Hazardous Decomposition Products | Nitrogen oxides. |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity*Nitric Acid*

| | |
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| Skin | Not Available |
| Eyes | Not Available |
| Respiratory | Not Available |
| Ingestion | LDLO Oral – Human – 430 mg/kg |

Carcinogenicity

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| IARC | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| ACGIH | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| NTP | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

Signs & Symptoms of Exposure

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| Skin | Itching, swelling, redness, burning. |
| Eyes | Itching, redness, burning, watering eyes. |
| Respiratory | Burning, choking, shortness of breath, coughing, wheezing, dizziness. |
| Ingestion | Burning, choking, nausea, vomiting, pain. |

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|---------------------------------------|-------------------------------------|
| Chronic Toxicity | Not Available |
| Teratogenicity | Tetotoxicity (except death) |
| Mutagenicity | Not Available |
| Embryotoxicity | Tetotoxicity (except death) |
| Target Organ(s) | Lungs, Teeth, Cardiovascular system |
| Reproductive Toxicity | Not Available |
| Respiratory/Skin Sensitization | Not Available |

12. ECOLOGICAL INFORMATION

Ecotoxicity*Nitric Acid*

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| Aquatic Vertebrate | LC50 – Gambusia affinis – 72 mg/L – 96h |
| Aquatic Invertebrate | Not Available |
| Terrestrial | Not Available |

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|--------------------------------------|---------------|
| Persistence and Degradability | Not Available |
| Bioaccumulative Potential | Not Available |
| Mobility in Soil | Not Available |
| PBT and vPvB Assessment | Not Available |
| Other Adverse Effects | Not Available |

13. DISPOSAL CONSIDERATIONS

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| Waste Product or Residues | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue. |
| Product Containers | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

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| US DOT | UN2031, Nitric acid, 8, pg II |
| TDG | UN2031, NITRIC ACID, 8, pg II |
| IMDG | UN2031, NITRIC ACID, 8, pg II |
| Marine Pollutant | No |
| IATA/ICAO | UN2031, Nitric acid, 8, pg II |

15. REGULATORY INFORMATION

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| TSCA Inventory Status | All ingredients are listed on the TSCA Active inventory. |
| DSL / NDSL | All ingredients are listed on the DSL inventory. |
| California Proposition 65 | Not Listed |
| Rhode Island: Hazardous Substance List | Listed: Nitric Acid |
| Massachusetts: Toxic or Hazardous Substance List, Right to Know | Listed: Nitric Acid |
| Pennsylvania: Hazardous Substance List | Listed: Nitric Acid |
| New Jersey: Right to Know Hazardous Substance List | Listed: Nitric Acid |
| SARA 302 | Listed: Nitric Acid |
| SARA 304 | Listed: Nitric Acid |
| SARA 311 | Fire Hazard, Acute Health Hazard. |
| SARA 312 | Fire Hazard, Acute Health Hazard. |
| SARA 313 | Listed: Nitric Acid |
| WHMIS Canada | Class C: Oxidizing material. Class E: Corrosive material. |

16. OTHER INFORMATION

| Revision | Date |
|------------|------------|
| Original | 12/21/2015 |
| Revision 1 | 11/19/2021 |
| | |

Disclaimer: The information provided in this Safety Data Sheet ("SDS") is correct to the best of our knowledge, information, and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing, or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.