ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: April 16, 2025

Section 1: Product & Company Information

Product Identifier: **Nitric Acid 5% Solution**

Other Means of Identification
Product Number: 125018
125021

Recommended Use and Restrictions on Use
Recommended Use: Industrial, Manufacturing or Laboratory use.
Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information
Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918 USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-7300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Corrosion/Irritation, Skin - 1A
(Corrosion)Damage/Irritation, Eye - 1

Environmental Hazard(s)
Not classified.

Label Elements
Signal Word
DANGER

Hazard Symbol(s)

Hazard Statement(s)
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.

Precautionary Statements
General
Not classified.

Prevention
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position 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 or doctor/physician.
P321: Specific treatment (see supplemental first aid instructions on this label).
P363: Wash contaminated clothing before reuse.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity	Common Name/Synonym(s)	CAS #	Weight %	Impurity or Stabilizing Additive
Nitric acid	None known.	7697-37-2	5%	No

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if victim is not breathing Call a physician or poison control center immediately.

Skin Contact

Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.

Eye Contact

Rinse with plenty of water for at least 15 minutes and seek medical attention.

Ingestion

Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms

Causes severe skin and eye burns. Causes digestive tract burns. Mist or vapor extremely irritating to eyes and respiratory tract.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

In case of fire and/or explosion do not breathe fumes

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

The product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

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

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Mount respiratory protective device. Wear protective equipment. Keep unprotected people away.

Methods and Materials for Containment and Clean-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.

Notification Procedures

Prevent entry into waterways, sewers, basements or confined areas. Inform authorities if large amounts are involved.

Environmental Precautions

Dilute with plenty of water. Do not allow to enter sewer/ surface or ground water.

Section 7: Handling and Storage

Precautions for Safe Handling

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 a cool, dry, well-ventilated area. Keep away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Nitric acid	TLV	2 ppm 5.2 mg/m3	US. ACGIH Threshold Limit Values
Nitric acid	STEL	4 ppm 10 mg/m3	US. ACGIH Threshold Limit Values
Nitric acid	PEL	2 ppm 5 mg/m3	US OSHA Table Z-1
Nitric acid	REL	2 ppm 5 mg/m3	NIOSH
Nitric acid	STEL	4 ppm 10 mg/m3	NIOSH
Nitric acid	IDLH	25 ppm	NIOSH

Biological Limit Values

None of the components have assigned biological limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear chemical safety glasses or goggles.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear apron or protective clothing in case of contact.

Respiratory Protection

Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:	
Physical State:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor Threshold:	No data available.
pH:	No data available.
Melting Point/Freezing Point:	Undetermined
Initial Boiling Point and Boiling Range:	83 °C (181.4 °F)
Flash Point:	Not applicable.
Evaporation Rate (butyl acetate=1)**:**	No data available.
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	Not applicable.
Flammability Limit – Lower:	Not applicable.
Explosive Limit – Upper:	Not applicable.
Explosive Limit – Lower:	Not applicable.
Vapor Pressure:	23 hPa (17.3 mm Hg)
Vapor Density (air =1)**:**	No data available.
Relative Density (water=1)**:**	No data available.
Solubility(ies):	
Solubility in water:	Soluble in water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Other Information:	
Molecular Weight:	63.01 g/mol
Formula:	HNO3

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Material is stable under normal conditions.

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.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Nausea, vomiting, pain.
Inhalation: Coughing, wheezing, dizziness.
Skin Contact: Itching, swelling, redness, burning.
Eye Contact: Itching, redness, burning, watering eyes.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

No data available.

Dermal

No data available.

Inhalation
Not Available

Repeated Dose Toxicity
No data available.

Skin Corrosion/Irritation
Itching, swelling, redness, burning.

Serious Eye Damage/Eye Irritation
Itching, redness, burning, watering eyes.

Respiratory/Skin Sensitization
Coughing, wheezing, dizziness.

Carcinogenicity
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
US. National Toxicology Program (NTP) Report on Carcinogens
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity
In Vitro
No mutagenic components identified.
In Vivo
No mutagenic components identified.

Reproductive Toxicity
No components toxic to reproduction.

Specific Target Organ Toxicity – Single Exposure
Lungs, Teeth, Cardiovascular system.

Specific Target Organ Toxicity – Repeated Exposure
None known.

Aspiration Hazard
Not classified.

Other Effects
None known.

Section 12: Ecological Information

Ecotoxicity
Acute Hazards to the Aquatic Environment
Fish
Not Available
Aquatic Invertebrates
Not Available

Chronic Hazards to the Aquatic Environment
Fish
No data available.
Aquatic Invertebrates
No data available.
Toxicity to Aquatic Plants
No data available.

Persistence and Degradability
Biodegradation
Not Available
BOD/COD Ratio
No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
No data available on bioaccumulation.
Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

Not Available

Results of PBT and vPvB Assessment

No data available.

Other Adverse Effects

Not Available

Section 13: Disposal Considerations

Disposal Instructions

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.

Contaminated Packaging

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.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number:	UN2031
UN Proper Shipping Name:	Nitric acid
Technical Name:	-
Hazard Class:	8
Subsidiary Hazard Risk:	-
Packing Group:	II
DOT Label/Placard Exemptions:	Not determined
Special Provisions:	B2, B47, B53, IB2, T8, TP2.
Packaging Exceptions:	49CFR 173.154
Packaging Non-Bulk:	49CFR 173.158
Packaging Bulk:	49CFR 173.242
Reportable Quantity (RQ):	1,000lb (454kg)
Marine Pollutant:	No
Poison Inhalation Hazard:	No
Special precautions for user:	Transport within the user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Emergency Response Guidebook (ERG) #:	157

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Nitric acid (CAS#7697-37-2)

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

The following chemicals(s) in this material are subject to reporting levels established by SARA Title III, Section 302:

Nitric acid (CAS#7697-37-2)

EPCRA 304 Emergency Response Notification

The following chemicals(s) in this material are subject to reporting levels established by SARA Title III, Section 304:

Nitric acid (CAS#7697-37-2)

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No

Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:
Nitric acid (CAS#7697-37-2)

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2
Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Special: COR
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

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