

Section 1: Product & Company Information

Product Identifier: Nitric Acid 42° Be ~67%

Other Means of Identification

Product Number: No data available.

Recommended Use and Restrictions on Use

Recommended Use: Not available.
Restrictions on Use : Not known.

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® 1-800-424-9300 / 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)

Oxidizing, Liquids - 3
Corrosive to Metals - 1

Health Hazard(s)

Acute Toxicity, Inhalation - 2
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)

H272: May intensify fire; oxidizer.
H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H330: Fatal if inhaled.

Precautionary Statements

General

Not applicable.

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220: Keep/Store away from clothing/combustible materials.
P221: Take any precaution to avoid mixing with combustibles.
P234: Keep only in original container.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: Wear respiratory 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.
 P320: Specific treatment is urgent (see supplemental first aid instructions on this label).
 P321: Specific treatment (see supplemental first aid instructions on this label).
 P363: Wash contaminated clothing before reuse.
 P370 + P378: In case of fire: Use suitable extinguishing media for extinction.
 P390: Absorb spillage to prevent material damage.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.
 P406: Store in corrosive resistant container with a resistant inner liner.

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

Mixture

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Nitric Acid	Aqua Fortis, Azotic Acid	7697-37-2	65 – 70%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- “—”Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

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

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.

Ingestion

Call a physician or poison control center immediately. DO NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Symptoms

Corrosive to skin and eyes. Causes digestive tract burns. Spray mists may cause respiratory tract irritation.

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

Strong oxidizer - contact with other material may cause fire.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

Oxidizing Contact with combustible material may cause fire. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

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

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Eliminate all sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

Methods and Materials for Containment and Clean-Up

Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if possible without any risk. Do not absorb in sawdust or other combustible materials. Absorb spill with vermiculite or other inert material. Collect in a non-combustible container for prompt disposal. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

Use caution when handling/transferring. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible. Observe good industrial hygiene practices.

Conditions for Safe Storage, including any Incompatibilities

Do not store in metal containers. Store away from heat and light. Keep away from combustible material. Keep containers closed when not in use. Store in a cool, dry place. Keep container in a well-ventilated place.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Nitric Acid	TWA	2 ppm	US. ACGIH Threshold Limit Values
Nitric Acid	STEL	4 ppm	US. ACGIH Threshold Limit Values
Nitric Acid	PEL	2 ppm 5 mg/m3	US OSHA Table Z-1
Nitric Acid	TWA	2 ppm 5 mg/m3	US OSHA Table Z-1
Nitric Acid	STEL	4 ppm 10 mg/m3	US OSHA Table Z-1

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with 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 safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

In case of inadequate ventilation use suitable respirator. Chemical respirator with acid gas cartridge.

Hygiene Measures

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless to Slightly Yellow

Odor:

Pungent

Odor Threshold:

No data available.

pH:

1 (0.1 molar aqueous solution)

Melting Point/Freezing Point:

-42 °C

Initial Boiling Point and Boiling Range:

122 °C

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: No data available.

Flammability Limit – Lower: No data available.

Explosive Limit – Upper: No data available.

Explosive Limit – Lower: No data available.

Vapor Pressure:

6.4 kPa

Vapor Density (air =1):

2.5

Relative Density (water=1):

1.41 (20 °C)

Solubility(ies):

Solubility in water: Soluble

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: No data available.

Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

Reacts violently with strong alkaline substances.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur. Decomposes on heating.

Conditions to Avoid

Reacts violently with strong alkaline substances. Avoid contact with strong reducing agents. Excessive heat. Contact with incompatible materials.

Incompatible Materials

Alcohols. Reducing agents. Metals. Alkalis.

Hazardous Decomposition Products

Nitrogen Oxides By heating and fire, corrosive vapors/gases may be formed.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: May cause burns of the gastrointestinal tract if swallowed.

Inhalation: May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

No data available.

Dermal

No data available.

Inhalation

Nitric Acid: LC 50 (Rat, 4 h): 65 mg/l

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

Causes severe skin burns.

Serious Eye Damage/Eye Irritation

Causes serious eye damage.

Respiratory/Skin Sensitization

Not a skin nor a respiratory sensitizer.

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

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

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

Nitric Acid: LC 50 (Fish, 48 h): 100 – 300 mg/l Mortality

Aquatic Invertebrates

Nitric Acid: LC 50 (Cockle (Cerastoderma edule), 48 h): 330 – 1,000 mg/l Mortality

Nitric Acid: LC 50 (Green or European shore crab (Carcinus maenas), 48 h): 180 mg/l Mortality

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

Expected to be readily biodegradable.

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

The product is water soluble and may spread in water systems.

Other Adverse Effects

The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

Section 13: Disposal Considerations

Disposal Instructions

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied.

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: 5.1
Packing Group: II
DOT Label/Placard Exemptions: Not determined
Special Provisions: A6, B2, B47, B53, IB2, IP15, T8, TP2
Packaging Exceptions: None
Packaging Non-Bulk: 49CFR 173.158
Packaging Bulk: 49CFR 173.242
Reportable Quantity (RQ): 1000lb (454kg)
Marine Pollutant: No
Poison Inhalation Hazard: No
Special precautions for user: Transport within 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 chemical(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 chemical(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: Yes
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: Yes

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 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: 3

Chronic Health Hazard: *

Flammability: 0

Physical Hazard: 1

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

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 3

Fire Hazard: 0

Reactivity Hazard: 1

Special: OX

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

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Revisions: -

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

Disclaimer

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