



Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Nitric Acid, 5% (v/v)/ Hydrogen Peroxide, 10% (v/v)

Product Number: R3835000

Other Identifying Product Numbers: R3835000-1B

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive
Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

Safety Data Sheet

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute Toxicity - Inhalation	Category 2	H330	P260, P271, P285, P304+P340, P310, P320, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 1A	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Reproductive Toxicity	Category 2	H361	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Oxidizing Liquids	Category 3	H272	P210, P220, P221, P280, P370+P378, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
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.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.

Safety Data Sheet

Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks and open flame. No smoking.
P220	Keep away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory 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.
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.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P320	Specific treatment is urgent (Wash areas of contact with water immediately).
P321	Specific treatment (Wash areas of contact with water immediately).
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide 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 corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458



Safety Data Sheet

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	91.66%
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	5.11%
Hydrogen Peroxide	H ₂ O ₂	34.01 g/mol	7722-84-1	3.23%

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, tearing and burns. Symptoms may include corneal ulceration and possible damage to vision.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Causes irritation to skin, symptoms include redness, itching, and pain.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with large amounts of water. Do not induce vomiting. Vomiting may cause further damage due to the corrosive nature of this product. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

CAUTION! Oxidizer. Reacts with a broad range of materials. Corrosive. Causes burns to eyes and skin. Wash areas of contact with plenty of water. For eyes, get medical attention. If ingested, give large quantity of water. Do not induce vomiting. Call a physician. EYE CONTACT: May cause irritation, redness, pain, tearing and burns. Symptoms may include corneal ulceration and possible damage to vision. SKIN CONTACT: Causes irritation to skin, symptoms include redness, itching, and pain.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water immediately). Specific treatment (Wash areas of contact with water immediately).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Use water or water spray. Do not use dry chemical, Carbon Dioxide or Halon.

5.2. Specific Hazards Arising from the Substance or Mixture

May intensify fire; oxidizer. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire. Explosion hazard when exposed to heat, flame or oxidizers.



Safety Data Sheet

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Mix and add water to form slurry. Decant the liquid to the drain with excess water. Treat the solid residue as normal refuse. Wash site with soda ash solution. Always dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep away from combustibles, ignition sources, organic materials, or other oxidizable substances. Refrigeration will slow down decomposition. Containers should be vented. Periodically check for bulging containers, which can burst from increased pressure. Do not return any unused material to the original container. Utensils used must be of compatible materials like glass, stainless steel, aluminum or plastic.

SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Hydrogen Peroxide (7722-84-1)	TWA	USA	1 ppm TWA 1.4 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrogen Peroxide (7722-84-1)	TLV-TWA	USA	1 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA 5 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves, Butyl, Viton or Natural Rubber (latex).



Safety Data Sheet

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. Chemical resistant gloves, Butyl, Viton or Natural Rubber (latex). Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: < 1

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point /Range: Approximately 100°C - Approximately 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.03

Solubility: Miscible

Partition Coefficient (n-Octanol/Water): Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage. This solution gradually decomposes at room temperature, and more rapidly as the temperature increases, losing available oxygen.

10.2. Possibility of Hazardous Reactions

Data not available.



Safety Data Sheet

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Combustible materials, alkalis, alcohols, iodides, lime water, sulfites, permanganates, organic compounds (such as wood, oil), acids, metals. Ammonia and their Carbonates, Albumin, Phenol, Charcoal, Chlorides, Alkali Citrates, Ferrous, Mercurous or Gold salts, Hypophosphites, Limewater, Tinctures and organic matter in general.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Fatal if inhaled. Do not breathe fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Other Information:

LD50, Oral, Rat: (8-20% (w/w) Hydrogen Peroxide), 1518 mg/kg with behavioral effects noted. LDLo, Oral, Human: 430 mg/kg (Nitric Acid), details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.



Safety Data Sheet

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.



Safety Data Sheet

SECTION 14: Transportation Information

14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 1 L

UN Number: UN3098

Proper Shipping Name: Oxidizing liquid, corrosive, n.o.s. (Hydrogen Peroxide, Nitric Acid)

Hazard Class: 5.1 (8)

Packing Group: III

Hazard Placard Labels:



Sizes:

UN Number:

Proper Shipping Name:

Hazard Class:

Packing Group:

Hazard Placard Labels:

14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L

UN Number: UN3098

Proper Shipping Name: Oxidizing liquid, corrosive, n.o.s. (Hydrogen Peroxide, Nitric Acid)

Hazard Class: 5.1 (8)

Packing Group: III

Hazard Placard Labels:



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.



Safety Data Sheet

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Nitric Acid (CAS # 7697-37-2): 1000 lb EPCRA RQ
Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ
Hydrogen Peroxide (CAS # 7722-84-1): 1000 lb EPCRA RQ (concentration >52%)
Hydrogen Peroxide (CAS # 7722-84-1): 1000 lb TPQ (concentration >52%)

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration

15.5. Massachusetts Right-to-Know Substance List

Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous
Hydrogen Peroxide (CAS # 7722-84-1): Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Nitric Acid (CAS # 7697-37-2): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Present
Hydrogen Peroxide (CAS # 7722-84-1): Environmental hazard (concentration >52%); Present
Hydrogen Peroxide (CAS # 7722-84-1): Present (concentration >52%)
Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Nitric Acid (CAS # 7697-37-2): corrosive; reactive - second degree
Nitric Acid (CAS # 7697-37-2): sn 1356
Nitric Acid (CAS # 7697-37-2): SN 1356 500 lb TPQ
Nitric Acid (CAS # 7697-37-2): sn 3722
Nitric Acid (CAS # 7697-37-2): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Hydrogen Peroxide (CAS # 7722-84-1): corrosive; mutagen; reactive - third degree
Hydrogen Peroxide (CAS # 7722-84-1): sn 1015
Hydrogen Peroxide (CAS # 7722-84-1): SN 1015 500 lb TPQ (>52% concentration)

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Nitric Acid (CAS # 7697-37-2): Present (DSL)
Hydrogen Peroxide (CAS # 7722-84-1): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

Nitric Acid (CAS # 7697-37-2): Present
Hydrogen Peroxide (CAS # 7722-84-1): Present
Water (CAS # 7732-18-5): Present



Safety Data Sheet

**15.11. European Inventory of Existing Commercial Chemical Substances (EINECS),
European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)**
Not listed.

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May intensify fire; oxidizer. May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment is urgent (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Absorb spillage to prevent material damage.

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

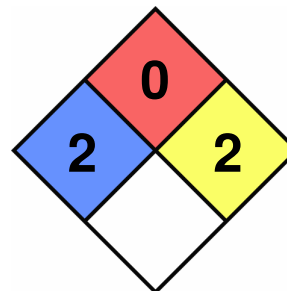
Not Applicable.



Safety Data Sheet

16.3. National Fire Protection Association (NFPA) Rating

Health: 2
Flammability: 0
Reactivity: 2
Special Hazard:





Safety Data Sheet

16.4. Document Revision

Last Revision Date: 12/1/2015

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.