

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Nitric Acid (70% or Less)

Synonyms: Hydrogen Nitrate, Nitric Acid Solution

1.2. Intended Use of the Product No additional information available

1.3. Name, Address, and Telephone of the Responsible Party

Company

LSB Chemical L.L.C.

4500 North West Ave.

P.O. Box 231

El Dorado, AR 71731

T (870) 863-1400 - F (870) 863-1126

1.4. Emergency Telephone Number

Emergency Number : (870)-863-1400, (800)-424-9300 (CHEMTREC, 24 hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Ox. Liq. 3 H272

Met. Corr. 1 H290

Skin Corr. 1 H314

Eye Dam. 1 H318

Aquatic Acute 3 H402

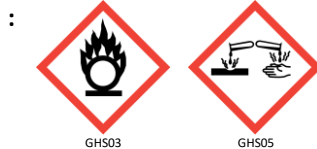
Aquatic Chronic 3 H412

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H272 - May intensify fire; oxidizer.
 H290 - May be corrosive to metals.
 H314 - Causes severe skin burns and eye damage.
 H318 - Causes serious eye damage.
 H402 - Harmful to aquatic life.
 H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P220 - Keep/Store away from extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.
 P221 - Take any precaution to avoid mixing with incompatible materials, ignition sources, combustible materials.
 P234 - Keep only in original container.
 P260 - Do not breathe vapors, mist, spray.
 P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves, protective clothing, eye protection, face protection, 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/shower.
 P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.

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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.
P321 - Specific treatment (see section 4 on this SDS).
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use appropriate media to extinguish.
P390 - Absorb spillage to prevent material-damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	%	GHS US classification
Nitric acid	Hydrogen Nitrate / Nitric acid Solution	(CAS-No.) 7697-37-2	< 70	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Water	AQUA / Aqua	(CAS-No.) 7732-18-5	30 - 35	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: Immediately call a poison center or doctor/physician. Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.

First-aid Measures After Skin Contact: Immediately remove contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Get immediate medical advice/attention.

First-aid Measures After Eye Contact: Immediately rinse with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. May be corrosive to the respiratory tract. Aspiration of this material may cause chemical pneumonia. May cause delayed pulmonary edema.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms: May cause erosion of the teeth, or chronic bronchitis. May cause cancer when contained in strong inorganic acid mist.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

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Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: May intensify fire; oxidizer.

Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Contact with metallic substances may release flammable hydrogen gas.

Reactivity: Oxidizer: increases the burning rate of combustible materials. Can react explosively with reducing agents, metal powders, Hydrogen sulfide, nitrate, and organic materials. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. Contact with metals may evolve flammable hydrogen gas. May be corrosive to metals.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Nitrogen oxides. acrid vapors.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses. Use water spray to disperse vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep away from combustible material.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Cautiously neutralize spilled liquid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Cautiously neutralize spilled liquid. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Absorb spillage to prevent material damage. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: When heated to decomposition, emits toxic fumes. May cause or intensify fire; oxidizer. May be corrosive to metals. May release corrosive vapors.

Precautions for Safe Handling: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking. Handle empty containers with care because they may still present a hazard.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations. Use explosion proof equipment.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, and incompatible materials. Keep in fireproof place. Store in original container or corrosive resistant and/or lined container. Store locked up/in a secure area.

Incompatible Materials: Strong acids. Strong oxidizers. Strong Bases. Reducing agents. Amines. Metals. May be corrosive to metals. Organic materials. Combustible materials.

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7.3. Specific End Use(s) No additional information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Nitric acid (7697-37-2)		
USA ACGIH	ACGIH TWA (ppm)	2 ppm
USA ACGIH	ACGIH STEL (ppm)	4 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	4 ppm
USA IDLH	US IDLH (ppm)	25 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Gas detectors should be used when flammable gases or vapors may be released. Gas detectors should be used when toxic gases may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Face shield. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing. Corrosion-proof clothing.

Hand Protection

: Wear chemically resistant protective gloves.

Eye and Face Protection

: Chemical safety goggles and face shield.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Colorless. Light brown.
Odor	: Acrid.
Odor Threshold	: No data available
pH	: < 1
Evaporation Rate	: ~ 1
Melting Point	: No data available
Freezing Point	: (65.7% HNO ₃ = -20°F); (67.2% HNO ₃ = -25°F)
Boiling Point	: (65.7% HNO ₃ = 246°F); (67.2% HNO ₃ = 248°F)
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor Pressure	: 9 - 10 mm Hg (@25°C (77°F))

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Relative Vapor Density at 20°C	: > 1 (air=1)
Relative Density	: No data available
Specific Gravity	: (65.7% HNO ₃ = 1.40101); (67.2% HNO ₃ = 1.4078);
Solubility	: Miscible.
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: (65.7% HNO ₃ = 2.1); (67.2% HNO ₃ = 2.2) @20°C (68°F)
Oxidizing Properties	: Oxidizing liquid 3 - May intensify fire;oxidizer.
Degrees Baume	: (65.7% HNO ₃ = 41.5); (67.2% HNO ₃ = 42)
9.2. Other Information	No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Oxidizer: increases the burning rate of combustible materials. Can react explosively with reducing agents, metal powders, Hydrogen sulfide, nitrate, and organic materials. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. Contact with metals may evolve flammable hydrogen gas. May be corrosive to metals.

10.2. Chemical Stability: May intensify fire; oxidizer.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, incompatible materials. Adding water to acid should be avoided.

10.5. Incompatible Materials: Strong acids. Strong oxidizers. Reducing agents. Amines. Metals. May be corrosive to metals. Organic materials. Combustible materials.

10.6. Hazardous Decomposition Products: Corrosive vapors. Nitrogen oxides. Thermal decomposition generates : Corrosive vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified.

Nitric acid (7697-37-2)	
LC50 Inhalation Rat	0.126 mg/l/4h
LC50 Inhalation Rat	2500 ppm/1h
LC50 Inhalation Rat	130 mg/l/4h
ATE (Gases)	1,250.00 ppmV/4h

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: < 1

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: < 1

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. May be corrosive to the respiratory tract. Aspiration of this material may cause chemical pneumonia. May cause delayed pulmonary edema.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms: May cause erosion of the teeth, or chronic bronchitis. May cause cancer when contained in strong inorganic acid mist.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life with long lasting effects.

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Nitric acid (7697-37-2)	
LC50 Fish 1	72 mg/l

12.2. Persistence and Degradability

Nitric Acid (70% or Less)	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

Nitric Acid (70% or Less)	
Bioaccumulative Potential	Not established.

Nitric acid (7697-37-2)	
Log Pow	-2.3 (at 25 °C)

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : NITRIC ACID *other than red fuming, with at least 65%, but not more than 70% nitric acid*
Hazard Class : 8
Identification Number : UN2031
Label Codes : 8, 5.1



Packing Group : II
ERG Number : 157

14.2. In Accordance with IMDG

Proper Shipping Name : NITRIC ACID *other than red fuming, with at least 65%, but not more than 70% nitric acid*
Hazard Class : 8
Subsidiary Risk(s) : 5.1
Identification Number : UN2031
Packing Group : II
Label Codes : 8, 5.1
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-Q



14.3. In Accordance with IATA

Proper Shipping Name : NITRIC ACID *other than red fuming, with at least 65%, but not more than 70% nitric acid*
Packing Group : II
Identification Number : UN2031
Hazard Class : 8
Label Codes : 8, 5.1
Subsidiary Risk(s) : 5.1
ERG Code (IATA) : 8L



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Nitric Acid (70% or Less)	
SARA Section 311/312 Hazard Classes	Physical hazard - Oxidizer (liquid, solid or gas) Physical hazard - Corrosive to metals Health hazard - Serious eye damage or eye irritation

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	Health hazard - Skin corrosion or Irritation
Nitric acid (7697-37-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	1 %
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Nitric acid (7697-37-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

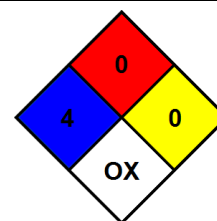
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 01/30/2020
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Ox. Liq. 3	Oxidizing liquids Category 3
Skin Corr. 1	Skin corrosion/irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA Health Hazard	: 4 - Materials that, under emergency conditions, can be lethal.
NFPA Fire Hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA Reactivity Hazard	: 0 - Material that in themselves are normally stable, even under fire conditions.
NFPA Specific Hazards	: OX - Materials that possess oxidizing properties.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)