

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Substance  
Substance name : Nitric Acid (Various Concentrations)  
CAS No. : 7697-37-2  
Formula : HNO<sub>3</sub> (aq)  
Synonyms : Nitric acid...%

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/preparation : Fertilizer, Industrial use

### 1.3. Details of the supplier of the safety data sheet

East Dubuque Nitrogen Fertilizers, LLC  
16675 Highway 20 West  
East Dubuque, IL 61025

T 815-747-3101

### 1.4. Emergency telephone number

Emergency number : 800-424-9300  
CHEMTREC

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Ox. Liq. 3	H272
Acute Tox. 2 (Inhalation: mist)	H330
Skin Corr. 1A	H314
Eye Dam. 1	H318

### 2.2. Label elements

#### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS03



GHS05



GHS06

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H272 - May intensify fire; oxidizer  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H330 - Fatal if inhaled  
Precautionary statements (GHS-US) : P210 - Keep away from open flames, sparks. - No smoking

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according to 29 CFR 1910.1200(g)

Signal word (GHS-US)	: Danger
	P220 - Keep/Store away from combustible materials
	P221 - Take any precaution to avoid mixing with combustible materials
	P260 - Do not breathe fume, mist, vapors, spray
	P264 - Wash hands and forearms thoroughly after handling
	P271 - Use only outdoors or in a well-ventilated area
	P280 - Wear eye protection, face protection, protective gloves, protective clothing
	P284 - [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): Remove/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 or doctor
	P370+P378 - In case of fire: Use appropriate media for extinction
	P403+P233 - Store in a well-ventilated place. Keep container tightly closed
	P405 - Store locked up
	P501 - Dispose of contents/container according to local, regional, national, and international regulations

### 2.3. Other hazards

Other hazards not contributing to the classification : Hazardous to the aquatic environment - Acute Hazard Category 3.  
Harmful to aquatic life.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	: Nitric Acid (Various Concentrations)
CAS No.	: 7697-37-2
EC no	: 231-714-2
EC index no	: 007-004-00-1

Name	Product identifier	%	GHS-US classification
Nitric acid	(CAS No.) 7697-37-2	20 - < 70	Ox. Liq. 3, H272 Acute Tox. 2 (Inhalation: mist), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318
Water	(CAS No.) 7732-18-5	30 - 80	Not classified

Full text of H-phrases: see section 16

### 3.2. Mixtures

Not applicable

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.
- First-aid measures after ingestion : If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Fatal if inhaled. Corrosive. Causes burns.
- Symptoms/injuries after inhalation : Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.
- Symptoms/injuries after skin contact : Contact may cause immediate severe irritation progressing quickly to chemical burns.
- Symptoms/injuries after eye contact : Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
- Symptoms/injuries after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
- Chronic symptoms : Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

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### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable. May cause or intensify fire; oxidizer. Under conditions of fire this material may produce: Nitrogen oxides; Nitrogen.
- Explosion hazard : Product is not explosive.
- Reactivity : May accelerate the burning of other combustible materials. May cause or intensify fire; oxidizer.

### 5.3. Advice for firefighters

- Firefighting instructions : Keep upwind. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

#### 6.1.2. For emergency responders

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Ventilate area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Liquid spill: neutralize with powdered limestone or sodium bicarbonate. Collect absorbed material and place into a sealed, labelled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Wear recommended personal protective equipment. Ensure there is adequate ventilation. Keep away from heat and open flame. Employ good maintenance practices to prevent leaks. Use good process control measures to prevent releases.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Incompatible materials : Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.
- Prohibitions on mixed storage : Keep away from (strong) bases.
- Storage area : Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials.
- Special rules on packaging : Do not store in steel or copper containers.

#### 7.3. Specific end use(s)


Fertilizer; Industrial use

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Nitric acid (7697-37-2)		
USA ACGIH	ACGIH TWA (ppm)	2 ppm
USA ACGIH	ACGIH STEL (ppm)	4 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm

#### 8.2. Exposure controls

- Appropriate engineering controls : Provide sufficient ventilation to keep ammonia vapors below the permissible exposure limit. Ensure adequate ventilation, especially in confined areas.
- Personal protective equipment : 
- Hand protection : Impermeable protective gloves.
- Eye protection : Chemical goggles and face shield.
- Skin and body protection : Wear suitable protective clothing. Chemical resistant suit, chemical resistant apron, boots.

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Respiratory protection	: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
Environmental exposure controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear
Molecular mass	: 63.01 g/mol (aq)
Color	: Colorless to straw yellow
Odor	: Pungent; Acrid
Odor threshold	: No data available
pH	: < 1
pH solution	: 10 %
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -18 - -34 °C (-0.5 - -30 °F) (20 - 85 % solution)
Freezing point	: No data available
Boiling point	: 103 - 122 °C (218 - 252 °F) (20 - 85 % solution)
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 7 mm Hg at 20 °C (68 °F)
Relative vapor density at 20 °C (68 °F)	: No data available
Relative density	: 1.12 - 1.41 (20 - 70 % solution, Water = 1)
Solubility	: Water: Miscible
Log Pow	: -2.3 (at 25 °C)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May accelerate the burning of other combustible materials. May cause or intensify fire; oxidizer.

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### 10.2. Chemical stability

Stable at standard temperature and pressure.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Protect from moisture.

### 10.5. Incompatible materials

Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.

### 10.6. Hazardous decomposition products

Under conditions of fire this material may produce: Nitrogen oxides; Nitrogen.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Fatal if inhaled.

Nitric acid (7697-37-2)	
LC50 inhalation rat (mg/l)	0.13 mg/l (Exposure time: 4 h)

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
pH: < 1 (10 % solution)

Serious eye damage/irritation : Causes serious eye damage.  
pH: < 1 (10 % solution)

Respiratory or skin sensitisation : 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 : Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

Symptoms/injuries after skin contact : Contact may cause immediate severe irritation progressing quickly to chemical burns.

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Symptoms/injuries after eye contact	: Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Nitric acid (7697-37-2)</b>	
LC50 fish 1	72 mg/l (Exposure time: 96 h - Species: Gambusia affinis)

### 12.2. Persistence and degradability

<b>Nitric Acid (Various Concentrations) (7697-37-2)</b>	
Persistence and degradability	Product is biodegradable.

### 12.3. Bioaccumulative potential

<b>Nitric Acid (Various Concentrations) (7697-37-2)</b>	
Bioaccumulative potential	Not expected to bioaccumulate.

<b>Nitric acid (7697-37-2)</b>	
Log Pow	-2.3 (at 25 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
Waste disposal recommendations	: Dispose of waste material in accordance with all local, regional, national, and international regulations.

## SECTION 14: Transport information

DOT Shipping information below applies to BULK shipments only.

### 14.1. UN number

DOT UN No. : UN2031

### 14.2. UN proper shipping name

DOT Proper Shipping Name : Nitric acid



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### Department of Transportation (DOT) Hazard Classes

< 65% Nitric Acid	: Class 8 - Corrosive material
≥ 65% to < 70% Nitric Acid	: Class 8 - Corrosive material and Subclass 5.1 - Oxidizer

Packing group (DOT) : II

### 14.3. Additional Information

DOT Reportable Quantity (RQ) : 1000 lb

CHRIS Code : NAC

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Nitric Acid (Various Concentrations) (7697-37-2)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Nitric acid (7697-37-2)	
United States TSCA (Toxic Substances Control Act) inventory	Yes
EPCRA (SARA) § 313	Yes - 1.0 % de minimus concentration
EPCRA (SARA) Threshold Planning Quantity (TPQ)	1000 lb
EPCRA (SARA) Reportable Quantity (RQ)	1000 lb
EPCRA(SARA) Extremely Hazardous Substance	Yes
CERCLA Reportable Quantity (RQ)	1000 lb
CERCLA Hazardous Substance	Yes

### 15.2. US State regulations

Nitric acid (7697-37-2)
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants With Proposed Risk Values
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Hawaii - Occupational Exposure Limits - STELs
U.S. - Hawaii - Occupational Exposure Limits - TWAs
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Illinois - Toxic Air Contaminants
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act

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U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Michigan - Polluting Materials List  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELs  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - STELs  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELs  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 25 Ft to Less Than 40 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 40 Ft to Less Than 75 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height Less Than 25 Feet  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals

## SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 2 (Inhalation: mist)	Acute toxicity (inhalation: mist) Category 2
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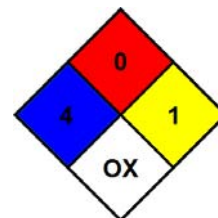
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Eye Dam. 1	Serious eye damage/eye irritation Category 1
Ox. Liq. 3	Oxidizing liquids Category 3
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled

NFPA health hazard	: 4 - Very short exposure could cause death or serious residual injury even though prompt medical attention was given.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
NFPA specific hazard	: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



*The information contained in this Safety Data Sheet (SDS) relates only to the specific product(s) designated herein. The information and recommendations are based upon data believed to be current as of the date of this SDS and was obtained from sources believed to be accurate. However, this information is furnished without warranty, representations, or license of any kind, express or implied, with respect to accuracy, correctness, or completeness and neither East Dubuque Nitrogen Fertilizers, LLC nor its affiliates assume any legal responsibility for use or reliance upon same.*

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