



Safety Data Sheet

NITRIC ACID

SECTION 1: Identification

1.1 Product identifier

Product name	NITRIC ACID
Product number	Unavailable
Brand	Unavailable
Substance name	NITRIC ACID 42 BE
EC no.	231-714-2
CAS no.	7697-37-2
Index no.	007-004-00-1

1.2 Other means of identification

None.

1.3 Recommended use of the chemical and restrictions on use

All proper and legal purposes.

1.4 Supplier's details

Name	Duda Energy LLC
Address	1112 Brooks St. Decatur, AL 35601 USA
Telephone	256.340.4866
Fax	Unavailable
email	Unavailable

1.5 Emergency phone number(s)

800.255.3924 (Chemtel)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: UN GHS rev. 5

- Oxidizing liquids (chapter 2.13), Cat. 3
- Acute toxicity, inhalation (chapter 3.1), Cat. 2

- Skin corrosion/irritation (chapter 3.2), Cat. 1A
- Eye damage/irritation (chapter 3.3), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P220	Keep/Store away from clothing/.../combustible materials.
P221	Take any precaution to avoid mixing with combustibles/...
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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): 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/doctor/...
P320	Specific treatment is urgent (see ... on this label).
P321	Specific treatment (see ... on this label).
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

Unavailable

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	NITRIC ACID 42 BE
EC no.	231-714-2
CAS no.	7697-37-2
Index no.	007-004-00-1
Formula	HNO ₃
Molecular weight	63.013
Other names / synonyms	Nitric Acid (68%)
Impurities and stabilizing additives	Unavailable

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Ensure that medical personnel are aware of the materials involved, and take precautions to protect themselves.
If inhaled	Move to fresh air. Call a physician if symptoms develop or persist.
In case of skin contact	Remove all contaminated clothing immediately. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns should be treated by a physician. Wash contaminated clothing before reuse.
In case of eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
If swallowed	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Personal protective equipment for first-aid responders	Unavailable

4.2 Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂)

5.2 Specific hazards arising from the chemical

During fire, gases hazardous to health may form.

5.3 Special protective actions for fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Move containers from fire area if you can do so without risk.

Further information

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

6.2 Environmental precautions

Avoid discharge into drains, water courses, or onto the ground.

6.3 Methods and materials for containment and cleaning up

Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand, or earth and place into containers. Following product recovery, flush area with water.

Small spills: Wipe up with absorbent material (e.g., cloth or fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Reference to other sections

None

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate PPE. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials.

Specific end use(s)

Unavailable

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Nitric acid (CAS: 7697-37-2)

REL (Inhalation): 2 ppm, (ST) 4 ppm (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

2. Nitric acid (CAS: 7697-37-2)

PEL (Inhalation): 2 ppm, (ST) 4 ppm (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

3. Nitric acid (CAS: 7697-37-2)

PEL (Inhalation): 5 mg/m³ (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

4. Nitric acid (CAS: 7697-37-2)

PEL (Inhalation): 2 ppm (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

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

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles. Face-shield.

Skin protection

Wear chemical resistant clothing, gloves.

Body protection

Chemical resistant clothing, long-sleeved.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls

Unavailable

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Liquid, clear to yellow
Odor	PUNGENT
Odor threshold	Unavailable
pH	1
Melting point/freezing point	-31.67 °C
Initial boiling point and boiling range	Unavailable
Flash point	Unavailable
Evaporation rate	Unavailable
Flammability (solid, gas)	Unavailable
Upper/lower flammability limits	Unavailable
Vapor pressure	-9-10 mm Hg at 25 °C (77 °F) for 65%-70%
Vapor density	Unavailable
Relative density	1.41
Solubility(ies)	Miscible in water.
Partition coefficient: n-octanol/water	Unavailable
Auto-ignition temperature	Unavailable
Decomposition temperature	Unavailable
Viscosity	Unavailable
Explosive properties	Unavailable
Oxidizing properties	Oxidizer

Other safety information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage, and transport.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Contact with incompatible materials.

10.5 Incompatible materials

Alcohols.

10.6 Hazardous decomposition products

Nitrogen oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Nitric acid (40% to 70%)

LC50 Inhalation - Rat - 2500 ppm - 1h

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitization

Not a respiratory sensitizer; is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Summary of evaluation of the CMR properties

Unavailable.

STOT-single exposure

Not classified

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Not an aspiration hazard.

Additional information

Prolonged inhalation may be harmful.

SECTION 12: Ecological information**Toxicity**

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms

Nitric acid:

LC50: = 72 mg/L, 96h

(Gambusia affinis)

Persistence and degradability

Miscible with water. Persistence is unlikely based on information available.

Bioaccumulative potential

Unavailable

Mobility in soil

Will likely be mobile in the environment due to its water solubility.

log Pow -2.3

Results of PBT and vPvB assessment

Unavailable

Other adverse effects

Unknown

SECTION 13: Disposal considerations

Disposal of the product

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents and container in accordance with local/regional/national/international regulations.

Disposal of contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Waste treatment

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Sewage disposal

Unavailable

Other disposal recommendations

Dispose of in accordance with all applicable regulations.

SECTION 14: Transport information

DOT (US)

UN Number:

Class:

Packing Group:

Proper Shipping Name:

Reportable quantity (RQ):

Marine pollutant:

Poison inhalation hazard:

Proper Shipping Name: NITRIC ACID (WITH NOT MORE THAN 70% NITRIC ACID)

Hazard Class: 8

UN/NA: UN2031

Packing Group: II

IMDG

UN Number:

Class:

Packing Group:

EMS Number:

Proper Shipping Name:

IATA

UN Number:

Class:

Packing Group:

Proper Shipping Name:

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Pennsylvania Right To Know Components

Chemical name: Nitric acid

CAS number: 7697-37-2

New Jersey Right To Know Components

Common name: NITRIC ACID

CAS number: 7697-37-2

Massachusetts Right To Know Components

Chemical name: Nitric acid

CAS number: 7697-37-2

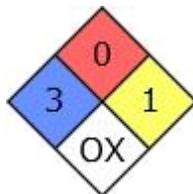
15.2 Chemical Safety Assessment

Unavailable

HMIS Rating

NITRIC ACID 42 BE
HEALTH
3
FLAMMABILITY
PHYSICAL HAZARD
PERSONAL PROTECTION

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of Duda Energy LLC's knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This Safety Data Sheet only contains information relating to safety and does not replace any product information or product specification. Please note, the content may be changed, corrected, or deleted at any time without notice and may not always necessarily reflect the most current data. Duda Energy LLC will assume no responsibility for any trouble or failure caused by the errors in the information provided, nor any damage associated with the usage of the information.

16.2 Preparation information

Version: 2

Revised: 04-04-2017