MATERIAL SAFETY DATA SHEET

www.britiscientific.com **Issue Date:**

1- Chemical Product Information and Company Identification.

Product Name: : Nitric acid (Fuming nitric acid), >98%.
Synonym: : Hydrogen Nitrate.
Product code: : BS12058.
CAS Number: : 7697-37-2.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055. Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
7697-37-2.	Nitric acid.	HNO_3.

Section 3- Hazards Identification.

Classification:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Oxidizing liquids	Category 3
Corrosive to metals	Category 1
Acute Inhalation Toxicity – Vapours	Category 3
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1

Label Element:

Pictogram

Signal Word Danger

Hazard Statements

May intensify fire; oxidizer.
May be corrosive to metals.
Causes severe skin burns and eye damage.
Toxic if inhaled.

Corrosive to the respiratory tract.

Precautionary Statements:

Prevention

Do not breathe dust/fume/gas/mist/vapours/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Use only outdoors or in a well-ventilated area.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep/Store away from clothing/ other combustible materials.
Take any precaution to avoid mixing with combustibles.
Keep only in original container.
Wear respiratory protection.

Response

Immediately call a POISON CENTER or doctor/physician.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician.

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

Fire

In case of fire: Use CO_2, dry chemical, or foam for extinction.

Spills

Absorb spillage to prevent material damage.

Storage

Store locked up.
Store in a well-ventilated place.
Keep container tightly closed.
Store in a dry place.

Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

Corrosive to the respiratory tract.

Section 4- First Aid Measures.

General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

Inhalation

If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove from exposure, lie down. Call a physician immediately.

Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Call a physician immediately. Most important symptoms and effects Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

Notes to Physician

Treat symptomatically.

Section 5- Fire Fighting Measures.

Suitable Extinguishing Media	CO_2, dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available.
Flash Point	Not applicable.
Method	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available.
Lower	No data available.
Oxidizing Properties	Oxidizer.
Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapours. The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

Hazardous Combustion Products

Nitrogen oxides (NOx). Thermal decomposition can lead to release of irritating gases and vapours.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapours.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	0	OX

Section 6- Accidental Release Measures.

Personal Precautions

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required.

Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal. Wear self-contained breathing apparatus and protective suit.

Section 7- Handling and Storage.

Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe mist/vapours/spray. Keep away from clothing and other combustible materials.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Do not store in metal containers. Keep in properly labelled containers. Corrosives area. Incompatible Materials. Combustible material. Strong bases. Reducing Agent. Metals. Finely powdered metals. Organic materials. Aldehydes. Alcohols. Cyanides. Ammonia. Strong reducing agents.

Section 8- Exposure Control/Personal Protection.

Legend

ACGIH - American Conference of Governmental Industrial Hygienists.
OSHA - Occupational Safety and Health Administration.
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Nitric acid	TWA: 2 ppm STEL: 4 ppm	(Vacated) TWA: 2 ppm (Vacated) TWA: 5 mg/m3 (Vacated) STEL: 4 ppm (Vacated) STEL: 10 mg/m3 TWA: 2 ppm TWA: 5 mg/m3	IDLH: 25 ppm TWA: 2 ppm TWA: 5 mg/m3 STEL: 4 ppm STEL: 10 mg/m	TWA: 2 ppm STEL: 4 ppm

Engineering Measures

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.

Personal Protective Equipment

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 EuropeanStandardEN166. Tight sealing safety goggles. Face protection shield.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

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.

Hygiene Measures

Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wear suitable gloves and eye/face protection.

Section 9- Physical and Chemical Properties.

Physical State:	Liquid
Appearance:	Colorless to Light yellow
Odor:	Strong Acrid
Odor Threshold:	No information available
Melting Point:	- 50 °C.
Boiling Point:	85 °C.
Flammability or explosive limits	
Upper	No data available.
Lower	No data available.
Vapour Pressure:	0.94 kPa (20°C)
Vapour Density:	No information available.
Specific Gravity:	1.40
Solubility:	Soluble in water.
Molecular Formula:	HNO_3
Molecular Weight:	63.01 g/mol.

Section 10- Stability and Reactivity.

Reactive Hazard: Yes

Stability Oxidizer

Contact with combustible/organic material may cause fire.

Conditions to Avoid

Incompatible products. Combustible material. Excess heat. Exposure to air or moisture over prolonged periods.

Incompatible Materials Combustible material, Strong bases, Reducing Agent, Metals, Finely powdered metals, Organic materials, Aldehydes, Alcohols, Cyanides, Ammonia, Strong reducing agents.

Hazardous Decomposition Products

Nitrogen oxides (NOx), Thermal decomposition can lead to release of irritating gases and vapours

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

Section 11- Toxicological Information.

Acute Toxicity

Product Information

Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Mist LC50

Category 3. ATE = 1 - 5 mg/l

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Causes severe burns by all exposure routes

Sensitization: No information available

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Section 12- Ecological Information.

Ecotoxicity

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

Persistence and Degradability: Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation: No information available.

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

Section 13- Disposal Considerations.

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14- Transport Information.

DOT

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

TDG

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8

Subsidiary Hazard Class	5.1
Packing Group	II

IATA

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

IMDG/IMO

UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

Section 15- Regulatory Information.

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export
and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent
organic pollutants.

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.