



Safety Data Sheet

Date of Issue: 09.07.2024

Date of Expiry: 09.07.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	Nitric Acid
Product Code	34401 , 34408
CAS No.	7697-37-2

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Oxidizing liquids (Category 3)
Corrosive to Metals (Category 1)
Acute toxicity, Inhalation (Category 4)
Skin corrosion/irritation (Category 1B)
Serious eye damage/eye irritation (Category 1)
Specific target organ toxicity - single exposure, Inhalation (Category 2)
Specific target organ toxicity - repeated exposure (Category 2)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word : **Danger**

Hazard statement(s)

H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H371 May cause damage to organs if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P220 Keep away from clothing and other combustible materials.
P260 Do not breathe mist or vapors.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 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/ doctor.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

2.3 Other hazards

Corrosive to the respiratory tract.

3: Composition/information on ingredients

3.2 Mixtures

Formula : HNO₃
CAS-No. : 7697-37-2
EC-No. : 231-714-2
Index-No. : 007-030-00-3

Hazardous ingredients

Component	Classification	Concentration
Nitric Acid		>= 64 - < 70 %

4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

No metal containers.

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials.

Storage class

Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Nitric acid	7697-37-2	WES-TWA	2 ppm 5.2 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		WES-STEL	4 ppm 10 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

Control of environmental exposure

Do not let product enter drains.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance		
Form	:	Liquid
Colour	:	Clear, Colourless
b) pH	:	< 1 at 20 °C
c) Initial boiling point and boiling range :		120.5°C (248.9°F)
d) Vapour pressure	:	287.9 kPa (@ 20°C)
e) Relative density	:	1.48 g/cm ³
f) Water solubility	:	Completely soluble
g) Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 3.

10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

May discolour on exposure to air and light.

10.5 Incompatible materials

Alkali metals, organic materials, acetic anhydride, acetonitrile, alcohols, acrylonitrile

10.6 Hazardous decomposition products

Nitrogen oxides

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute toxicity estimate Inhalation - 4 h - 15.71 mg/l - vapor(Calculation method)

Symptoms: Possible symptoms:;, mucosal irritations, Cough, Shortness of breath, Possible damages:;, damage of respiratory tract

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes severe burns.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

Risk of blindness!

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

RTECS: QU5775000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

nitric acid

Acute toxicity

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 2.65 mg/l - vapor
(Expert judgment)

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Causes severe burns.

Remarks: (IUCLID)

Remarks: Causes poorly healing wounds.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes burns.

Remarks: (IUCLID)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

12: Ecological information**12.1 Toxicity****Mixture**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

13: Disposal considerations**13.1 Waste treatment methods****Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	2031	2031	2031
14.2	UN Proper Shipping name	NITRIC ACID	NITRIC ACID	NITRIC ACID
14.3	Transport Hazard Class	8 (5.1)	8 (5.1)	8 (5.1)
14.4	Packaging group	II	II	II

14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	None		
14.7	Incompatible materials	Strong oxidizing agents Metals		

Other regulations

Hazchem Code : 2R

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Number : HSR100763

HSNO Group Standard Approval: not required

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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