

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the product****Product code:** N3115**Product name:** Nitric acid 65%**CAS No.:** 7697-37-2**1.2 Recommended use and restriction on use**

General use : Not available

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information**Importer/distributors identification**

Company : ASIA CHEMIE (THAILAND) CO., LTD.

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2. Hazards identification**2.1 GHS Classification**

Oxidizing liquids: Category1

Acute toxicity (inhalation: vapor): Category3

Skin corrosion/irritation: Category1

2.1 GHS label elements**Hazard symbols****Signal words :** Danger**Hazard statements**

H271 May cause fire or explosion; strong oxidizer

H314 Causes severe skin burns and eye damage

H331 Toxic if inhaled

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220 Keep/Store away from clothing//combustible materials.

P260 Do not breathe gas/mist/vapours/spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

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

P283 Wear fire/flammable resistant/retardant clothing.

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 victim to fresh air and keep at rest in a position 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.

P306+P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P310 Immediately call a POISON CENTER or doctor/physician.

P311 Call a POISON CENTER or doctor/physician.

P321 Specific treatment

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use Suitable extinguishing media for extinction

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P405 Store locked up.

P420 Store separately

P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : (NFPA Classification)

Not available

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS No.	Concentration (%)
Nitric acid	Fumic acid; Nital	7697-37-2	65
Water	Dihydrogen oxide; Oxidane	7732-18-5	35

4. First aid measures**4.1 Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

4.2 Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Wash thoroughly after handling.

4.3 Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Take the doctor's examination.

4.4 Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

4.6 Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire-fighting measures**5.1 Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

5.2 Specific hazards arising from the chemical

- Causes severe skin burns and eye damage
- May cause fire or explosion; strong oxidizer
- Toxic if inhaled.

5.3 Special protective actions for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment.
- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.

6.2 Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

- Appropriate container for disposal of spilled material collected.
- Dike for later disposal.
- Disposal of waste shall be in compliance with the Wastes Control Act.
- Large spill: Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.

7. Handling and storage

7.1 Precautions for safe handling

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.

7.2 Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.
- Do not apply direct heat.
- Do not use damaged containers.

8. Exposure controls/personal protection

8.1 Exposure limits

ACGIH TLV

- [Nitric acid] : TWA, 2 ppm (5.2 mg/m³) STEL, 4 ppm (10 mg/m³)

OSHA PEL

- [Nitric acid]: 5

8.2 Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health: Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate chemical resistant glove.

Skin protection

- Wear appropriate chemical resistant protective clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Liquid
- Color	colorless, yellow, red
B. Odor	characteristic
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	-41 °C
F. Initial Boiling Point/Boiling Ranges	121 °C
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available

J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	6.4 kPa (20 °C)
L. Solubility	9.09 g/100ml (25 °C (estimate))
M. Vapour density	2.2
N. Specific gravity (Relative density)	1.41
O. Partition coefficient of n-octanol/water	-2.3
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	0.746 cP (25°C)
S. Molecular weight	63.01
T. Molecular formula	HNO3

10. Stability and reactivity

10.1 Chemical Stability

- This material is stable under recommended storage and handling conditions.

10.2 Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid: Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.
- Keep away from heat source.

10.4 Incompatible materials

- Not available

10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. Toxicological information

11.1 Information on the likely routes of exposure

Respiratory tracts

- Not available

Oral

- Not available

Eye · Skin

- Causes severe skin burns and eye damage

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

* Oral

- Product (ATEmix) : Not available
- [Water] : LD50 > 90000 mg/kg Rat (LD50 > 90 ml/kg) (HSDB)

* Dermal

- Not available

* Inhalation

- Product (ATEmix) : 2.0mg/L < ATEmix ≤ 10.0mg/L
- [Nitric acid] : Vapor LC50 > 2.65 mg/l 4 hr Rat (OECD TG 403, GLP, Female/Male)

Skin corrosion/irritation

- Causes severe skin burns and eye damage

Serious eye damage/irritation

- Not available

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity

* IARC

- [Nitric acid]: Group 1 (in case of strong inorganic Acid mists)

* OSHA

- Not available

*** ACGIH**

- Not available

*** NTP**

- Not available

*** EU CLP**

- Not available

Germ cell mutagenicity

- Not available

Reproductive toxicity

- Not available

STOT-single exposure

- Not available

STOT-repeated exposure

- Not available

Aspiration hazard

- Not available

12. Ecological information

12.1 Ecotoxicity

Fish

- [Nitric acid] : LC50 4400 mg/l 96 hr (Salmo sp., Read-across CAS No. 7631-99-4)

Crustaceans

- [Nitric acid] : LC50 4.4 mg/l 48 hr Ceriodaphnia dubia (48h-LC50 Ceriodaphnia dubia=4.4 other: pH standard units / 48h-LC50 Daphnia magna=39 mg/l , Read-across based on CAS No. 7757-79-1), the effects assessment of nitric acid is focused on the pH effect and to a certain extent, this is also a read across exercise that identifies a category of substances which toxicological behavior can be characterized based on the acid properties of the substance. The substance will therefore not be classified for environmental hazards, based on the available information.

Algae

- Not available

12.2 Persistence and degradability

Persistence

- [Water] : log Kow = -1.38 (HSDB)

Degradability

- Not available

12.3 Bioaccumulative potential

Bioaccumulative potential

- Not available

Biodegradation

- Not available

12.4 Mobility in soil

- Not available

12.5 Other adverse effects

- [Nitric acid]: Fish, 3mo-NOEC other Amphiprion ocellaris anemone Fish, =97.8 mg/l, Read-across CAS No. 7631-99-4

13. Disposal considerations

13.1 Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if is applicable.
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them.
- Do disposal as the method of agglomeration, precipitation, filtration and dehydration after disposal using the reaction of neutralization and oxidation-reduction.
- Do disposal as the method of evaporation and concentration.
- Purified by means of Separation-distillation-extraction-filtration

13.2 Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act.
- Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information**14.1 UN No. (IMDG CODE/IATA DGR)**

- 2031

14.2 Proper shipping name

- NITRIC ACID OTHER THAN RED FUMING, WITH MORE THAN 70 PERCENT NITRIC ACID

14.3 Hazard Class

- 8(5.1)

14.4 IMDG CODE/IATA DGR Packing group

- II

14.5 Marine pollutant

- Not applicable

14.6 Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

- EmS FIRE SCHEDULE: F-A (General fire schedule)

- EmS SPILLAGE SCHEDULE: S-B (Corrosive substances)

15. Regulatory information**15.1 National and/or international regulatory information****POPs Management Law**

- [Nitric acid]: Not applicable

- [Water]: Not applicable

Information of EU Classification*** Classification**

- [Nitric acid] : H272, H314

U.S. Federal regulations*** OSHA PROCESS SAFETY (29CFR1910.119)**

- [Nitric acid] : 226.7995 kg 500 lb

*** CERCLA Section 103 (40CFR302.4)**

- [Nitric acid] : 453.599 kg 1000 lb

*** EPCRA Section 302 (40CFR355.30)**

- [Nitric acid] : 453.599 kg 1000 lb

*** EPCRA Section 304 (40CFR355.40)**

- [Nitric acid] : 453.599 kg 1000 lb

*** EPCRA Section 313 (40CFR372.65)**

- [Nitric acid] : Applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other information

Reason for the revision: General update.

Date: 17/10/2014

Revision 5

Date: 26/01/2024

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