

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No. : N 10730

Product Name : NITRIC ACID L.R.

Manufacturer/supplier identification

Company : NICE Chemicals (P) Ltd., Cochin, India

Tel - 0484 2800212, 2802755

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Aqueous solution

Hazardous ingredients:

Name according to EC Directives: Nitric Acid

Hazardous symbols: C O R-phrases: 8-35

EC-Index-No.: 007-004-00-1 Contact with combustible material may cause fire.

Causes severe burns.

CAS-No : 7697-37-2 Content : 65 %

3. HAZARDS INDEX : Causes severe burns.

4. FIRST AID MEASURES : After inhalation : fresh air. Summon doctor

After skin contact:wash off with plenty of water. Dab with polyethylene glycol 400. Immediately remove contaminated clothing.

After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately summon eye specialist.



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After swallowing: make victim drink plenty of water, (if necessary several litres), avoid vomiting (risk of perforation). Immediately summon doctor.

Do not attempt to neutralize.

5. FIRE-FIGHTING MEASURES: Suitable extinguishing media: Water, Foam, CO₂.

Special risks: Development of hazardous combustion gases or vapours possible in the event of fire. Hydrogen may form upon contact with metals (danger of explosion).

The following may develop in event of fire nitrous gases.

Special protective equipment for fire fighting: Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other information: Non-combustible. Contain escaping vapours with water. Cool container with spray water from a save distance. Prevent fire-fighting water from entering surface water or ground water.

6. ACCIDENTAL RELEASE MEASURES

Person - related precautionary measures : Avoid substance contact. Do not inhale vapours/aerosols.

Environmental - protection measures: Do not allow to enter sewerage system.

Procedures for cleaning/absorption: Take up dry with liquid-absorbent material (e.g. Chemizorb). Forward for disposal. Clean up affected area.

Additional notes: Render harmless: neutralize with diluted Sodium Hydroxide solution or by throwing on lime, lime sand, or Sodium Carbonate.



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7. HANDLING AND STORAGE

Handling - No further requirements.

Storage - Tightly closed. In a well-ventilated place. Protected from direct sunlight. At +15° C to +25° C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection: required when vapours/aerosols are generated.

Eye Protection : required Hand Protection : required

Industrial hygiene: Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Colour : colourless

> Odour : pungent

pH value (20°) : < 1

: $\sim -32^{\circ}$ C Melting temperature

Boiling temperature : Not available Ignition temperature : Not available Flash Point : Not available : Not available Explosion limit lower

: Not available upper

Vapour pressure (20 ° C) : ~ 9.4 hPa

Relative vapour density : Not available $: 1.40 \text{ gm/cm}^3$ Density (20°C)

Solubility in Water (20°C) : Soluble

Log P(oct) : -2.3 (unhydrous substance)



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10. STABILITY AND REACTIVITY

Conditions to be avoided: Heating

Substances to be avoided: Organic combustible substance, oxidizable substances, organic solvents, alcohols, ketones, aldehydes, anhydrides, amines, anilines, nitriles, organic nitro compounds, hydrazine & derivatives, acetylidene, metals, metal alloys, metallic oxides, alkali metals, alkaline earth metals, ammonia, alkalis, acids, hydrides, halogens, halogen compounds, nonmetals, phosphides, nitrides, lithium silicide, hydrogen peroxide.

Hazardous decomposition products: nitrous gases

Further information:

Strong oxidizing agent, incompatible with metals (generation of hydrogen).

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Quantitative data on the toxicity

of this product are not available.

Subacute to chronic toxicity: Checks into the substance have so far not disclosed any investigations concerning possible teratogenic effects.

Further toxicological information: Strong corrosive substance.

After inhalation of vapours: Burns of mucous membranes, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract.

After eye contact: Burns

After swallowing: Tissue damage (mouth, oesophagus, gastrointestinal tract), strong pain (risk of perforation!) bloody vomiting, death.



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Further Data:

The product should be handled with the care usual when dealing with chemicals.

12. ECOLOGICAL INFORMATION

Behavior in environmental compartments:

Distribution: Log P(oct): -2.3 (unhydrous substance);

Ecotoxic effects: Biological effects: Toxic for aquatic organisms. Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixture with water even if diluted. Does not cause biological oxygen deficit. Hazard for drinking water supplies.

Further ecologic data: The following applies to nitrates in general: May contribute to the eutrophication of water supplies. Hazard for drinking water.

Fish: $LC_{50} > 500 \text{ mg/lt.}$ Do not allow to enter water, waste water or soil!

13. DISPOSAL METHOD

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like house-hold waste or recycled.

There are no uniform EC Regulations for the disposal of chemical or residues. Chemical residues generally count as special waste. Approved waste disposal companies which will advise you on how to dispose of special waste.

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14. TRANSPORT INFORMATION

Transport over land

ADR/RID and GGVS/GGVE: GGVS/GGVE class: 8 Number and letter: 2b

ADR/RID class: 8 Number and letter: 2b

Name of material: NITRIC ACID

Sea Transport IMDG : IMDG class : 8 UN No. : 2031 Packing group : II

Ems: 8-03 MFAG: 700 Correct Technical Name: NITRIC ACID

Air Transport ICAO-TI

and IATA-DGR: ICAO/IATA class: 8 UN No.: 2031

Packaging group: II

Correct Technical Name: NITRIC ACID

15. REGULATORY INFORMATION

Labelling according to EC Directives

Symbol : C CorrosiveHighly flammabl

R-phrases : 35 Causes severe burns.

S-phrases : 23-26-36/37/39-45 Do not breathe vapour. In case of contact, with eyes, rinse immediately

with plenty of water and seek medical advice. Wear suitable protective clothing, gloves & eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Water pollution class: 1 (slightly polluting substance)



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16. OTHER INFORMATION

General update:

The information contained herein is based on the present state of our knowledge.

It characterises the product with regarf to the appropriate safety precautions.

It does not represent a guarantee of the properties of the product.