

Safety Data Sheet	Issue no.: 5	Issue Date: 19.09.25	Page 1 of 7	SDS 18
NITRIC ACID 50% (V/V) SOLUTION and 3% POTASSIUM DICHROMATE				

Section 1 – Chemical Product and Company Identification

1.1. Product identifier:

Nitric acid 50% (v/v) solution and 3% Potassium dichromate.

1.2. Relevant identified uses of the substance or mixture and uses advised against:

To be used as a sample preservative for analytical testing.

1.3. Details of the supplier of the safety data sheet:



ALS Laboratories (UK) Limited

Torrington Avenue,
Coventry, CV4 9GU

1.4. Emergency telephone number

T: +44 (0)24 7642 1213

F: +44 (0)24 7685 6575

Section 2 – Hazards Identification

2.1. Classification of the substance or mixture

Acute toxicity (inhalation, Category 2), H330

Acute toxicity (ingestion, Category 3), H301

Acute toxicity (skin contact, Category 4), H312

Aquatic toxicity (Acute and Chronic, Category 1) H410

Carcinogen (Category 1B), H350

Mutagen (Category 1B), H340

Oxidising solution (Category 2), H272

Reproductive toxicity (Category 1B), H360FD

Respiratory sensitiser (Category 1), H334

Skin corrosion (Category 1B), H314

Skin sensitiser (Category 1), H317

Specific organ toxicity (Category 1), H372

2.2. Label elements

Pictograms



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Signal word: Danger

Hazard statement(s)

H272 - May intensify fire; oxidiser
H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H330 - Fatal if inhaled
H334 - May cause allergy symptoms or breathing difficulties if inhaled
H340 - May cause genetic defects
H350 - May cause cancer
H360FD - May damage fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

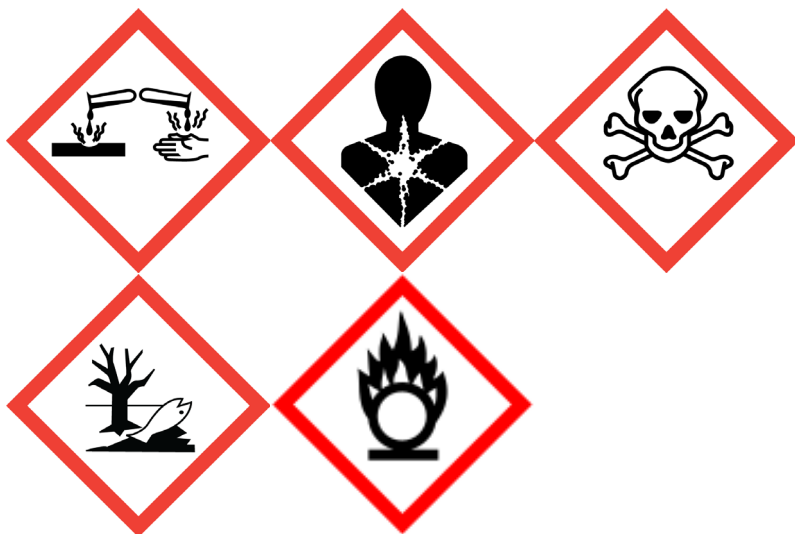
P260: Do not breathe dust/fumes/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: [In case of inadequate ventilation] wear respiratory protection.
P301+P310: IF SWALLOWED: immediately call poison centre.
P303+353+361: IF ON SKIN: 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
P308+P311: If exposed or concerned Call a POISON CENTER.

Supplemental Hazard Statements:

None.

Reduced labelling for packages where contents do not exceed 125ml.

Pictograms



Signal word: Danger

Hazard statement(s)

H301 - Toxic if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H330 - Fatal if inhaled

H334 - May cause allergy symptoms or breathing difficulties if inhaled

H340 - May cause genetic defects

H350 - May cause cancer

H360FD - May damage fertility or the unborn child

H410 - Very toxic to aquatic life with long lasting effects

2.3. Other hazards - none

Section 3 – Composition, Information on Ingredients

3.2. Mixtures

Component	Hazards	Concentration
Nitric acid 69-70%	H314, H331.	60%
Potassium dichromate	H272, H301, H312, H314, H317, H330, H334, H340, H350, H360FD, H372, H410.	3%
Water	None.	37%

Section 4 – First Aid Measures

4.1. Description of first aid measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once. Cover burns with loose sterile non-medicated bandages.

Skin: Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes. Cover burns with a dry sterile bandage (secure, not tight).

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Ingestion: Get medical aid at once. Give 1 ounce of milk of magnesia. Give conscious victim large quantities of water to dilute acid. Give oxygen if respiration is depressed.

Inhalation: Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air. Maintain airway and blood pressure.

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

Notes to Physician: Treat symptomatically and supportively. Symptoms of poisoning may occur after several hours, therefore medical observation for at least 48 hours after the accident.

Section 5 – Fire Fighting Measures

5.1. Extinguishing media: Use firefighting methods suitable to surrounding conditions.

5.2. Special hazards arising from the substance or mixture: Can form explosive gas-air mixtures. During heating or in case of fire poisonous gases are produced. Potassium oxides.

5.3. Advice for firefighters: Wear self-contained breathing apparatus.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures: Protect skin and eyes from spillages. Ensure adequate ventilation. Consider RPE against the effects of fumes.

6.2. Environmental precautions: Prevent spills from entering waterways and sewers.

6.3. Methods and materials for cleaning up: Use a suitable absorbent. Use neutralizing agents if available. Collect into a container, close lid. Dispose as hazardous waste.

6.4. Reference to other sections. See suitable PPE in section 8.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist. Avoid contact with eyes, skin, and clothing. Handle as corrosive liquid, dispense with care; wear protective clothing, gloves and goggles.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

7.3 Specific end use(s)

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

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Section 8 – Exposure Controls, Personal Protection

8.1. Control parameters: Under EH40 (UK) STEL 1ppm (Nitric acid). 0.05mg/m³ (Potassium dichromate)

8.2. Exposure controls: Eyes: Wear chemical splash goggles and/or face shield. Skin: Wear appropriate acid resistant gloves, apron, and/or clothing. Clothing: Wear appropriate clothing to prevent skin exposure.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Clear liquid

Appearance: colourless

Odour: ammonia like

pH: very acidic

Boiling Point: 100°C.

Solubility: Soluble.

9.2. Other information

Section 10 – Stability and Reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal temperatures and pressures up to boiling point.

10.3. Possibility of hazardous reactions

Hazardous Polymerization: Has not been reported.

10.4. Conditions to avoid

Incompatible materials, easily oxidized materials.

10.5. Incompatible materials

Organic substances, amines, sulphides, finely powdered metals.

10.6. Hazardous decomposition products

Potassium oxides, chromium oxide.

Section 11 – Toxicological Information

11.1. Information on toxicological effects:

INHALATION

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

INGESTION

May be fatal if swallowed.

SKIN CONTACT

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May be fatal if absorbed through skin. Causes severe burns.

EYE CONTACT

Causes severe burns and serious eye damage.

Germ cell mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer.

LD/LC50 values relevant for classification

Oral - LD50 - 190mg/kg (mouse)

Dermal - LD50 - 1170 mg/kg (rat)

Inhalation - LC50/4h - 0.5mg/l (mouse)

Section 12 – Ecological Information

12.1. Toxicity: No data available.

12.2. Persistence and degradability: No data available.

12.3. Bioaccumulative potential: No data available.

12.4. Mobility in soil: Extremely hazardous for water. Danger to drinking water even if extremely small quantities leak into the ground. Toxic to aquatic organisms.

12.5. Results of PBT and vPvB assessment: No data available.

12.6. Other adverse effects: No data available.

Section 13 – Disposal Considerations

13.1. Waste treatment methods

Reuse or reprocess if possible. Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with regulations (contact environmental agency for specific rules). Waste characterisation and compliance with applicable laws are the responsibility of the waste generator.

Section 14 – Transport Information

14.1. UN number: UN 2922.

14.2. UN proper shipping name: Corrosive liquids, toxic.

14.3. Transport hazard class(es): 8.

14.4. Packing group: II.

14.5. Environmental hazards: No.

14.6. Special precautions for user: As per section 7.

Section 15 – Regulatory Information

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

CDG (Carriage of Dangerous Goods) Regulations

CLP (Chemicals, Labelling and Packaging) Regulations.

CoSHH (Control of Substances Hazardous to Health) regulations

Hazardous Waste Regulations

PPE Regulations

Workplace Exposure Limits EH40

15.2. Chemical safety assessment: For this product a chemical safety assessment was not carried out.

Section 16 – Other Information

16.1 Other information

Written by Paul Talbot.

16.2. Date of the latest revision of the SDS

See document header.