

Revision: 2.0
(Replaces revision 1.2 of 16 April 2021)Revision date:
Date printed:18 June 2021
12 August 2023**Section 1. Identification****1.1 Product Identifier** 4056

Product Name NITRIC ACID 70% w/w ACS

CAS Number 7697-37-2

REACH Registration No 01-2119487297-23-XXXX

Molecular Formula HNO_3 =63.01**1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories LtdGrangefield Industrial Estate
Richardshaw Road
Pudsey
West Yorkshire
LS28 6QW
UNITED KINGDOMPhone 44 0113 2362811
Fax +44(0)113 2362703
Email safety@viclabs.co.uk
Website www.viclabs.co.uk**1.4 Emergency Telephone** (08:00-16:30) +44(0) 113 2362811
(24hr) 112
(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Oxidising liquid, category 3

Skin corrosion/irritation, category 1A

Acute toxicity, category 3 (inhalation)

H272: May intensify fire; oxidizer.

H314: Causes severe skin burns and eye damage.

H331: Toxic if inhaled.

2.2 Label elements**Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements May intensify fire; oxidizer. Causes severe skin burns and eye damage. Toxic if inhaled.

Precautionary Statements Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Supplemental Hazard Information (EU) Corrosive to the respiratory tract.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Nitric acid	7697-37-2	231-714-2	01-2119487297-23-XXXX	69%	Ox. Liq. 3, Skin Corr. 1A, Acute Tox. 3 (I)

Section 4. First Aid

4.1 Description of first aid measures

Eyes Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.

Skin Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. OBTAIN MEDICAL ATTENTION URGENTLY.

Inhalation Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If conscious place in a sitting position. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion If conscious give plenty of water to drink. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

Personal protection for first aiders Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media Consider what other flammable materials are present and act accordingly.

Unsuitable Media Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards May evolve toxic fumes if involved in a fire.

5.3 Advice for firefighters

Advice for firefighters Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

6.2 Environmental precautions

Environmental Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

Minor Spillage Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Keep well separated from acids, metals, explosives, organic peroxides and ignitable materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits	
			Long Term (8hr TWA)	Short Term 15min period
Nitric acid	7697-37-2	69%	-	1.0 ppm 2.8 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.

Hand Protection Use PVC gauntlets.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Clear colourless to pale yellow fuming liquid.

Odour Suffocating and irritating.

pH 1 @ 20°C

Boiling Point 122°C

Melting Point -42°C

Flash Point Not applicable

Upper Flammable Limit Not applicable

Lower Flammable Limit Not applicable

Auto Ignition Not applicable

Explosive Properties No.

Oxidising Properties A strong oxidising agent.

Vapour Pressure 9mmHg @ 20°C

Relative Density	1.4200
Water Solubility	Completely soluble in water with moderate increase in temperature.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	No specific conditions.
10.5 Incompatible Materials	Reducing agents. Alkalis. Many organic compounds. Combustible materials.
10.6 Hazardous Decomposition Products	Not flammable but will assist a fire, producing irritant and toxic fumes of oxides of nitrogen.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	The vapour is extremely irritating to eyes and can cause chemical eye burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	Both the vapour and liquid will cause severe burns. The liquid or concentrated vapour will cause immediate severe and penetrating burns. Concentrated solutions will cause deep burns and yellow discolouration of the skin. Dilute solutions will be irritating to the skin.
LD50 Skin	Not available
Ingestion	Ingestion may prove fatal. Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus. Symptoms may include salivation, thirst, difficulty in swallowing, pain, shock and vomiting.
LD50 Oral	Not available
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. Prolonged exposure to vapour concentrations above the occupational exposure limits may have serious effects with initially no pathological signs. Further exposure may cause acute pulmonary oedema often with a serious outcome.
LD50 Inhalation	2.65mg/l Rat
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	No information is available.
Reproductive Effects	None identified.

Section 12. Ecological

12.1 Toxicity	Acidic, nutrient for undesirable algae.
LC50 Algal	Not available
LC50 Crustacea	Not available
LC50 Fish	3.7mg/l Rainbow Trout
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 & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dilute in a large excess of water and carefully neutralise with soda ash, then wash to drain with copious amounts of water.
Contaminated Packaging	Use a licensed waste disposer. Wash out containers with water.

Section 14. Transport Information

14.1 UN Number	2031
14.2 Proper Shipping Name	Nitric acid
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	5.1
Transport category	2
ADR Hazard ID	85
Tunnel Restriction Code	E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Oxidising liquid, category 3; Skin corrosion/irritation, category 1A; Acute toxicity, category 3 (inhalation)

Signal word Danger

Hazard Pictograms



Hazard Statements H272, H314, H331
May intensify fire; oxidizer. Causes severe skin burns and eye damage. Toxic if inhaled.

Precautionary Statements P280, P260, P301+P330+P331, P303+P361+P353, P304+P340, P305+P351+P338
Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Supplemental Hazard Information (EU) EUH071
Corrosive to the respiratory tract.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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