**Product Name** AA Furnace (non-Zeeman) PM-OQ Standards Kit

**Product Code(s)** 5799-0009

This product is a kit, composed of the following individual chemical components:

## Kit Components

| Component Part Number | Component Name | Volume or mass/ container and unit | No. of component containers/ kit |
|---|---|---|---|
| 5799-0020 | 0.2% Nitric Acid Blank | 50 mL | 1 |
| 5799-0010 | 0.025 mg/L Copper in 0.2% HNO3 | 50 mL | 1 |

SDSs for each component follow this cover sheet.

## Transportation Information for the Kit:

**Proper Shipping Names:**

| DOT | IATA/ICAO | China |
|---|---|---|
| Not Regulated | Not Regulated | Not Regulated |

# SAFETY DATA SHEET

**Issuing Date** 05-Dec-2025 **Revision date** 05-Dec-2025 **Revision Number** 1

## Section 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

**Product Code(s)** 5799-0020

**Product Name** 0.2% Nitric Acid Blank

**Other means of identification**

**Synonyms** No information available

**Recommended use of the chemical and restrictions on use**

**Recommended use** Reagents and Standards for Analytical Chemical Laboratory Use

**Uses advised against** Do not use outside of recommended applications

**Supplier's details**

**Supplier**

Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany

0800 603 1000

For further information, please contact

**Emergency telephone number**

**Emergency Telephone** CHEMTREC®: +60 3-9212 5794

**E-mail address** pdl-msds_author@agilent.com

## SECTION 2: Hazard identification

**Classification of the substance or mixture**
Not a hazardous substance or mixture according to the Globally Harmonised System (GHS) Not classified

**Label elements**

**Hazard statements**
Not a hazardous substance or mixture according to the Globally Harmonised System (GHS) Not classified

**Other hazards which do not result in classification**
Causes mild skin irritation.

## Section 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

**Chemical nature** aqueous solution.

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Water | 7732-18-5 | 99.8 |
| Nitric Acid | 7697-37-2 | 0.2 |

**Additional information**
The concentration of the acid stated in this SDS is calculated as an absolute mass concentration (%w/v). This is less than the acid concentration stated on the product label and COA, which reflects a percent value of the commercially available concentrated aqueous form of the acid.

## SECTION 4: First aid measures

**Description of necessary measures**

**Inhalation** Remove to fresh air.

**Skin contact** Wash skin with soap and water.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

**Ingestion** Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Note to doctors** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable (and unsuitable) extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

**Special protective equipment and precautions for fire-fighters**

| | |
|---|---|
| **Special protective equipment and precautions for fire-fighters** | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

| | |
|---|---|
| **Personal precautions** | Ensure adequate ventilation. |
| **For emergency responders** | Use personal protection recommended in Section 8. |

**Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | See Section 12 for additional Ecological Information. |

**Methods and material for containment and cleaning up**

| | |
|---|---|
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |
| **Methods for cleaning up** | Pick up and transfer to properly labelled containers. |

**Precautions to prevent secondary hazards**

| | |
|---|---|
| **Prevention of secondary hazards** | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## SECTION 7: Handling and storage

**Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Handle in accordance with good industrial hygiene and safety practice. |
| **General hygiene considerations** | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. |

**Conditions for safe storage, including any incompatibilities**

| | |
|---|---|
| **Storage Conditions** | Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. |
| **Incompatible materials** | None known based on information supplied. |

## Section 8: Exposure controls and personal protection

**Control parameters**

**Exposure Limits**

| Chemical name | Malaysia | ACGIH TLV |
|---|---|---|
| Nitric Acid<br>7697-37-2 | TWA: 2 ppm<br>TWA: 5.2 mg/m³ | TWA: 2 ppm<br>STEL: 4 ppm |

**Biological occupational exposure limits**
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

| | |
|---|---|
| **Engineering controls** | Showers<br>Eyewash stations<br>Ventilation systems. |

**Individual protection measures, such as personal protective equipment**

| | |
|---|---|
| **Eye/face protection** | Avoid contact with eyes. Wear safety glasses with side shields (or goggles). |
| **Hand protection** | Wear protective Neoprene™ gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. |
| **Skin and body protection** | Wear suitable protective clothing. |
| **Respiratory protection** | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| **Environmental exposure controls** | No information available. |

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Appearance** | Liquid | | |
| **Physical state** | Liquid | **Colour** | colourless |
| **Odour** | Odourless. | **Odour threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | No data available | None known |
| **Melting point / freezing point** | 0 °C | None known |
| **Initial boiling point and boiling range** | 100 °C | None known |
| **Flash point** | No data available | None known |
| **Evaporation rate** | No data available | None known |
| **Flammability** | No data available | None known |
| **Upper/lower flammability or explosive limits** | | None known |
| **Upper flammability or explosive limits** | No data available | |
| **Lower flammability or explosive limits** | No data available | |
| **Vapour pressure** | 23 hPa | @ 20°C |
| **Relative vapour density** | No data available | None known |
| **Relative density** | 0.99821 g/cm3 at 20 °C | None known |
| **Water solubility** | No data available | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | 100 °C | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |

**Other information**

| | |
|---|---|
| **Explosive properties** | No information available |
| **Oxidising properties** | No information available |
| **Molecular weight** | No information available |
| **VOC content** | No information available |
| **Particle characteristics** | |

## SECTION 10: Stability and reactivity

**Reactivity**

**Reactivity** Contact with acids liberates very toxic gas.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid**

**Conditions to avoid** None known based on information supplied.

**Incompatible materials**

Incompatible materials None known based on information supplied

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

**Information on the likely routes of exposure**

**Product Information**

| | |
|---|---|
| **Inhalation** | Specific test data for the substance or mixture is not available. |
| **Ingestion** | Specific test data for the substance or mixture is not available. |
| **Skin contact** | Specific test data for the substance or mixture is not available. Causes mild skin irritation. |
| **Eye contact** | Specific test data for the substance or mixture is not available. |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Prolonged contact may cause redness and irritation.

**Acute toxicity**

**Numerical measures of toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document**

| | |
|---|---|
| **ATEmix (oral)** | 99,999.00 mg/kg |
| **ATEmix (dermal)** | 99,999.00 mg/kg |
| **ATEmix (inhalation-gas)** | 99,999.00 ppm |
| **ATEmix (inhalation-dust/mist)** | 99,999.00 mg/l |
| **ATEmix (inhalation-vapour)** | 1,325.00 mg/l |

**Chronic (long-term) toxicity** No information available

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Water | > 90 mL/kg ( Rat ) | | |
| Nitric Acid | | | = 2500 ppm ( Rat ) 1 h<br>ATE (vapours) = 2.65 mg/L |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients Causes mild skin irritation

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Nitric Acid | -2.3 |

**Mobility**

**Mobility in soil** No information available.

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

| Chemical name | PBT and vPvB assessment |
|---|---|
| Water | The substance is not PBT / vPvB. |
| Nitric Acid | The substance is not PBT / vPvB. |

**Other adverse effects**

**Other adverse effects** No information available.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

| Chemical name | EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances |
|---|---|---|
| Water | -. | -. |
| Nitric Acid | -. | -. |

## SECTION 13: Disposal information

**Disposal methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## SECTION 14: Transportation information

**IMDG**

**UN number** Not regulated
**Transport hazard class(es)** Not regulated
**Packing group** Not regulated
**Marine pollutant** Not applicable
**Special Provisions** None
**Transport in bulk according to Annex II of MARPOL 73/78 and** No information available

**the IBC Code**

**RID**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**ADR**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**IATA**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**

**Special precautions for user** Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

**Safety, health and environmental regulations specific for the product in question**

**National regulations**

**Malaysia - Applicable regulations:**

**OSHA (Occupational Safety and Health Act) 1994 and relevant regulations**

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations

An occupational medicine specialist familiar with national and regional regulations and standards must be consulted to establish a program of medical examinations for workers exposed to substances with biological limit values. See section 8 for national exposure control parameters.

| Chemical name | Pre-employment screening and appropriate health surveillance |
|---|---|
| Nitric Acid - 7697-37-2 | Listed |

**International Inventories**

| | |
|---|---|
| **TSCA** | U.S. INVENTORY (TSCA): Listed on inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only. |
| **DSL/NDSL** | Contact supplier for inventory compliance status. |
| **EINECS/ELINCS** | Contact supplier for inventory compliance status. |
| **ENCS** | Contact supplier for inventory compliance status. |
| **IECSC** | Contact supplier for inventory compliance status. |
| **KECL** | Contact supplier for inventory compliance status. |

| | |
|---|---|
| **PICCS** | Contact supplier for inventory compliance status. |
| **AIIC** | Contact supplier for inventory compliance status. |

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## SECTION 16: Other information

**Date of preparation of the SDS** 05-Dec-2025

**Date of revision of the SDS** 05-Dec-2025

**Revision Note** The symbol (*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**
X - Listed
Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | Sk* | Skin designation |

**Key literature references and sources for data used to compile the SDS**
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

**Disclaimer**
**The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.**

**End of Safety Data Sheet**

# SAFETY DATA SHEET

**Revision date** 05-Dec-2025 **Revision Number** 1

## Section 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

**Product Code(s)** 5799-0010

**Product Name** 0.025 mg/L Copper in 0.2% HNO3

**Other means of identification**

**Synonyms** No information available

**Recommended use of the chemical and restrictions on use**

**Recommended use** Reagents and Standards for Analytical Chemical Laboratory Use

**Uses advised against** Do not use outside of recommended applications

**Supplier's details**

**Supplier**

Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany

0800 603 1000

For further information, please contact

**Emergency telephone number**

**Emergency Telephone** CHEMTREC®: +60 3-9212 5794

**E-mail address** pdl-msds_author@agilent.com

## SECTION 2: Hazard identification

**Classification of the substance or mixture**
Not a hazardous substance or mixture according to the Globally Harmonised System (GHS) Not classified

**Label elements**

**Hazard statements**
Not a hazardous substance or mixture according to the Globally Harmonised System (GHS) Not classified

**Other hazards which do not result in classification**
Causes mild skin irritation.

## Section 3: Composition/information on ingredients

**Substance**

Not applicable

**Mixture**

**Chemical nature** aqueous solution.

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Nitric Acid | 7697-37-2 | 0.2 |

**Additional information**
The concentration of the acid stated in this SDS is calculated as an absolute mass concentration (%w/v). This is less than the acid concentration stated on the product label and COA, which reflects a percent value of the commercially available concentrated aqueous form of the acid.

## SECTION 4: First aid measures

**Description of necessary measures**

**Inhalation** Remove to fresh air.

**Skin contact** Wash skin with soap and water.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

**Ingestion** Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Note to doctors** Treat symptomatically.

## SECTION 5: Firefighting measures

**Suitable (and unsuitable) extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

**Special protective equipment and precautions for fire-fighters**

| | |
|---|---|
| **Special protective equipment and precautions for fire-fighters** | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

| | |
|---|---|
| **Personal precautions** | Ensure adequate ventilation. |
| **For emergency responders** | Use personal protection recommended in Section 8. |

**Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | See Section 12 for additional Ecological Information. |

**Methods and material for containment and cleaning up**

| | |
|---|---|
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |
| **Methods for cleaning up** | Pick up and transfer to properly labelled containers. |

**Precautions to prevent secondary hazards**

| | |
|---|---|
| **Prevention of secondary hazards** | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## SECTION 7: Handling and storage

**Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Handle in accordance with good industrial hygiene and safety practice. |
| **General hygiene considerations** | Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. |

**Conditions for safe storage, including any incompatibilities**

| | |
|---|---|
| **Storage Conditions** | Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. |
| **Incompatible materials** | None known based on information supplied. |

## Section 8: Exposure controls and personal protection

**Control parameters**

**Exposure Limits**

| Chemical name | Malaysia | ACGIH TLV |
|---|---|---|
| Nitric Acid<br>7697-37-2 | TWA: 2 ppm<br>TWA: 5.2 mg/m$^3$ | TWA: 2 ppm<br>STEL: 4 ppm |

**Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific

regulatory bodies.

**Appropriate engineering controls**

| | |
|---|---|
| **Engineering controls** | Showers<br>Eyewash stations<br>Ventilation systems. |

**Individual protection measures, such as personal protective equipment**

| | |
|---|---|
| **Eye/face protection** | Avoid contact with eyes. Wear safety glasses with side shields (or goggles). |
| **Hand protection** | Wear protective Neoprene™ gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. |
| **Skin and body protection** | Wear suitable protective clothing. |
| **Respiratory protection** | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| **Environmental exposure controls** | No information available. |

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Appearance** | Liquid | | |
| **Physical state** | Liquid | **Colour** | colourless |
| **Odour** | Odourless. | **Odour threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | No data available | None known |
| **Melting point / freezing point** | 0 °C | None known |
| **Initial boiling point and boiling range** | 100 °C | None known |
| **Flash point** | No data available | None known |
| **Evaporation rate** | No data available | None known |
| **Flammability** | No data available | None known |
| **Upper/lower flammability or explosive limits** | | None known |
| **Upper flammability or explosive limits** | No data available | |
| **Lower flammability or explosive limits** | No data available | |
| **Vapour pressure** | 23 hPa | @ 20°C |
| **Relative vapour density** | No data available | None known |
| **Relative density** | 0.99821 g/cm3 at 20 °C | None known |
| **Water solubility** | No data available | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | 100 °C | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |

**Other information**

| | |
|---|---|
| **Explosive properties** | No information available |

| | |
|---|---|
| **Oxidising properties** | No information available |
| **Molecular weight** | No information available |
| **VOC content** | No information available |
| **Particle characteristics** | |

## SECTION 10: Stability and reactivity

**Reactivity**
**Reactivity** Contact with acids liberates very toxic gas.

**Chemical stability**
**Stability** Stable under normal conditions.

**Explosion data**
**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**
**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid**
**Conditions to avoid** None known based on information supplied.

**Incompatible materials**
Incompatible materials None known based on information supplied

**Hazardous decomposition products**
**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

**Information on the likely routes of exposure**

**Product Information**

| | |
|---|---|
| **Inhalation** | Specific test data for the substance or mixture is not available. |
| **Ingestion** | Specific test data for the substance or mixture is not available. |
| **Skin contact** | Specific test data for the substance or mixture is not available. Causes mild skin irritation. |
| **Eye contact** | Specific test data for the substance or mixture is not available. |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Prolonged contact may cause redness and irritation.

**Acute toxicity**

**Numerical measures of toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document**

| | |
|---|---|
| **ATEmix (oral)** | 99,999.00 mg/kg |
| **ATEmix (dermal)** | 99,999.00 mg/kg |

**ATEmix (inhalation-gas)** 99,999.00 ppm
**ATEmix (inhalation-dust/mist)** 99,999.00 mg/l
**ATEmix (inhalation-vapour)** 1,325.00 mg/l

**Chronic (long-term) toxicity** No information available

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Water | > 90 mL/kg ( Rat ) | | |
| Nitric Acid | | | = 2500 ppm ( Rat ) 1 h<br>ATE (vapours) = 2.65 mg/L |
| Copper | | | > 5.11 mg/L ( Rat ) 4 h |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients Causes mild skin irritation

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Nitric Acid | -2.3 |

**Mobility**

**Mobility in soil** No information available.

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

| Chemical name | PBT and vPvB assessment |
|---|---|
| Nitric Acid | The substance is not PBT / vPvB. |

**Other adverse effects**

**Other adverse effects** No information available.

**Endocrine Disruptor Information**

| Chemical name | EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation | EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances |
|---|---|---|
| Nitric Acid | -. | -. |

## SECTION 13: Disposal information

**Disposal methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## SECTION 14: Transportation information

**IMDG**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Marine pollutant** | Not applicable |
| **Special Provisions** | None |
| **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** | No information available |

**RID**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**ADR**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**IATA**

| | |
|---|---|
| **UN number** | Not regulated |
| **Transport hazard class(es)** | Not regulated |
| **Packing group** | Not regulated |
| **Environmental hazards** | Not applicable |
| **Special Provisions** | None |

**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**

**Special precautions for user** Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

**Safety, health and environmental regulations specific for the product in question**

**National regulations**

**Malaysia - Applicable regulations:**

**OSHA (Occupational Safety and Health Act) 1994 and relevant regulations**

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations

An occupational medicine specialist familiar with national and regional regulations and standards must be consulted to establish a program of medical examinations for workers exposed to substances with biological limit values. See section 8 for national exposure control parameters.

| Chemical name | Pre-employment screening and appropriate health surveillance |
|---|---|
| Nitric Acid - 7697-37-2 | Listed |

**International Inventories**

| | |
|---|---|
| **TSCA** | U.S. INVENTORY (TSCA): Listed on inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only. |
| **DSL/NDSL** | Contact supplier for inventory compliance status. |
| **EINECS/ELINCS** | Contact supplier for inventory compliance status. |
| **ENCS** | Contact supplier for inventory compliance status. |
| **IECSC** | Contact supplier for inventory compliance status. |
| **KECL** | Contact supplier for inventory compliance status. |
| **PICCS** | Contact supplier for inventory compliance status. |
| **AIIC** | Contact supplier for inventory compliance status. |

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## SECTION 16: Other information

**Date of preparation of the SDS**

**Date of revision of the SDS** 05-Dec-2025

**Revision Note** The symbol (*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**
X - Listed
Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | Sk* | Skin designation |

**Key literature references and sources for data used to compile the SDS**
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

**Disclaimer**

**The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.**

**End of Safety Data Sheet**