



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
WHS Regulations

Revision date 29-Apr-2024

Revision Number 1

## Section 1: Identification: Product identifier and chemical identity

### Product identifier

**Product Name** Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

**Product Code(s)** 5190-9418

### Other means of identification

**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid)

**Chemical name**  
**Pure substance/mixture** Mixture

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

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

**Uses advised against** No information available.

**Chemicals of Security Concern** This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

### Details of manufacturer or importer

#### Supplier

Agilent Technologies Australia Pty Ltd  
679 Springvale Road  
Mulgrave  
Victoria 3170, Australia

1800 802 402

For further information, please contact

**Contact Point** Product Safety Department

**E-mail address** pdl-msds\_author@agilent.com

### Emergency telephone number

**Emergency telephone number** CHEMTREC®: +(61)-290372994

## Section 2: Hazard(s) identification

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

## GHS Classification

<b>Corrosive to metals</b>	Category 1
<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 1

## Label elements

Corrosion



## Signal word

DANGER

## Hazard statements

May be corrosive to metals.  
Causes skin irritation.  
Causes serious eye damage.

## Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.  
Keep only in original packaging.  
Wear protective gloves/clothing and eye/face protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISONS INFORMATION CENTRE or doctor.  
IF ON SKIN: Wash with plenty of water and soap.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
Absorb spillage to prevent material damage.

## Precautionary Statements - Storage

Store in corrosion resistant container with a resistant inner liner.

## Other hazards which do not result in classification

No information available.

## Section 3: Composition/information on ingredients

Chemical name	CAS No.	Weight-%
Nitric Acid	7697-37-2	0 - 10%
hydrofluoric acid	7664-39-3	0 - 10%
Non-hazardous ingredients	Proprietary	Balance

## 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.

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

## Section 4: First aid measures

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

**Symptoms** Burning sensation.

### Indication of any immediate medical attention and special treatment needed

**Note to doctors** Treat symptomatically.

## Section 5: Firefighting measures

### Suitable 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

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

### Special protective actions for firefighters

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

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

**Hazchem code** 2X

## Section 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

### Precautions to prevent secondary hazards

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

## Section 7: Handling and storage, including how the chemical may be safely used

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before re-use.

**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. Regular cleaning of equipment, work area and clothing is recommended.

### 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. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Incompatible materials** Oxidising agent. Strong acids. Strong bases.

# SAFETY DATA SHEET

 5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

## Section 8: Exposure controls and personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia	New Zealand	ACGIH TLV
Nitric Acid 7697-37-2	TWA: 2 ppm TWA: 5.2 mg/m <sup>3</sup> STEL: 4 ppm STEL: 10 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 5.2 mg/m <sup>3</sup> STEL: 4 ppm STEL: 10 mg/m <sup>3</sup>	TWA: 2 ppm STEL: 4 ppm
hydrofluoric acid 7664-39-3	TWA: 2.5 mg/m <sup>3</sup> Peak: 3 ppm Peak: 2.6 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> Ceiling: 3 ppm Ceiling: 2.6 mg/m <sup>3</sup>	TWA: 0.5 ppm F S* Ceiling: 2 ppm F

Chemical name	European Union	United Kingdom	Germany DFG
Nitric Acid 7697-37-2	-	STEL: 1 ppm STEL: 2.6 mg/m <sup>3</sup>	-
hydrofluoric acid 7664-39-3	TWA: 1.8 ppm TWA: 1.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 2.5 mg/m <sup>3</sup>	TWA: 1.8 ppm TWA: 1.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 2.5 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 0.83 mg/m <sup>3</sup> Peak: 2 ppm Peak: 1.66 mg/m <sup>3</sup> *

### Biological occupational exposure limits

Chemical name	Australia	ACGIH	European Union
hydrofluoric acid 7664-39-3	-	3 mg/g creatinine - urine (Fluoride) - prior to shift 10 mg/g creatinine - urine (Fluoride) - end of shift	-

### Appropriate engineering controls

**Engineering controls**                      Showers  
 Eyewash stations  
 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). Tight sealing safety goggles.

**Skin and body protection**                      Wear suitable protective clothing. Long sleeved clothing.

**Hand protection**                              The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective Neoprene™ gloves. Polyvinyl chloride (PVC). Wear suitable gloves. Impervious gloves.

**Respiratory protection**                      Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** No information available.

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Liquid
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Relative vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Auto-ignition temperature</b>	460 °C	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

<b>VOC content</b>	No information available
<b>Particle characteristics</b>	No information available

## Section 10: Stability and reactivity

### Reactivity

**Reactivity** No information available.



# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

## 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** Exposure to air or moisture over prolonged periods.

## Incompatible materials

**Incompatible materials** Oxidising agent. Strong acids. Strong bases.

## Hazardous decomposition products

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

## **Section 11: Toxicological information**

### Information on likely routes of exposure

#### **Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact** Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms** Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

### Acute toxicity

#### Numerical measures of toxicity - Product Information

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



# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

ATEmix (inhalation-gas) 99,999.00 ppm  
ATEmix (inhalation-vapour) 66.70 mg/l  
ATEmix (inhalation-dust/mist) 99,999.00 mg/l

## Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric Acid	-	-	= 2500 ppm ( Rat ) 1 h ATE (vapours) = 2.65 mg/L
hydrofluoric acid	-	-	= 0.79 mg/L ( Rat ) 1 h

See section 16 for terms and abbreviations

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Causes serious eye damage.
<b>Respiratory or skin sensitisation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## Section 12: Ecological information

### Ecotoxicity

Aquatic ecotoxicity



# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
hydrofluoric acid	-	-	-	EC50: ≈270mg/L (48h, Daphnia species)

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation**

**Component Information**

Chemical name	Partition coefficient
Nitric Acid	-2.3
hydrofluoric acid	-1.4

**Mobility**

**Mobility** No information available.

**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
Nitric Acid	-	-
hydrofluoric acid	-	-

## Section 13: Disposal considerations

**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 re-use empty containers.

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

See section 8 for more information

## Section 14: Transport information

### ADG

UN number or ID number	UN3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid)
Transport hazard class(es)	8
Packing group	III
Environmental hazard	Yes
Special Provisions	223, 274
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid), 8, III
Limited quantity (LQ)	5 L
Hazchem code	2X

### IATA

UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid)
Transport hazard class(es)	8
Packing group	III
ERG Code	8L
Special Provisions	A3, A803
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid), 8, III

### IMDG

UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid)
Transport hazard class(es)	8
Packing group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Marine pollutant	P
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid, hydrofluoric acid), 8, III, Marine pollutant

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information available

## Section 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### Australia

See section 8 for national exposure control parameters

### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

Poison Schedule Number 10

## Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Nitric Acid - 7697-37-2	Contact supplier for inventory compliance status Present	-
hydrofluoric acid - 7664-39-3	Present	Specific information requirement: Obligations to provide information apply. You must tell us within 28 days if the circumstances of your importation or manufacture (introduction) are different to those in our assessment.

## Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

## Chemicals of Security Concern

This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Chemical name	Chemicals of Security Concern	Additional information
Nitric Acid - 7697-37-2	Present High risk	Precursors to homemade explosives

## Major hazard (accident/incident planning) regulation

Verify that license requirements are met

### Named hazardous chemicals

Chemical name	Threshold quantity (T)
hydrofluoric acid - 7664-39-3	50 tonne TQ 50 tonne TQ >50% solution Hydrofluoric acid

## National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
Nitric Acid - 7697-37-2	10 tonne/yr Threshold category 1
hydrofluoric acid - 7664-39-3	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

## International Inventories

**AIC**

Contact supplier for inventory compliance status.

**NZIoC**

Contact supplier for inventory compliance status.

**TSCA**

LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDC, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

**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.

### Legend:

**AICS** - Australian Inventory of Chemical Substances**NZIoC** - New Zealand Inventory of Chemicals**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

## 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: Any other relevant information**

**Revision date** 29-Apr-2024

### 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

#### Legend

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances



# SAFETY DATA SHEET

5190-9418 - Quality Control Standard 27 in 5% HNO<sub>3</sub>, tr. HF

Revision date 29-Apr-2024

STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

## 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
C	Carcinogen		

## 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)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
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 Program  
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**