

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.12.2020

Version number 1

Revision: 16.12.2020

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

**1.1 Product identifier****Product name: Potassium Standard: 1000 µg/mL K in 5% HNO<sub>3</sub> [500ml bottle]****Part number: 5190-8504****1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany

Tel:0800 603 1000

**Further information obtainable from:** e-mail: [pdl-msds\\_author@agilent.com](mailto:pdl-msds_author@agilent.com)**1.4 Emergency telephone number:** CHEMTREC®: +(44)-870-8200418

### SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS05

**Signal word** Danger**Hazard-determining components of labelling:**

nitric acid

**Hazard statements**

H290 May be corrosive to metals.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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- **Precautionary statements**

- P280 Wear protective gloves / eye protection / face protection.  
 P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/doctor.  
 P321 Specific treatment (see on this label).  
 P332+P313 If skin irritation occurs: Get medical advice/attention.  
 P406 Store in a corrosion resistant container / container with a resistant inner liner.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.




### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:**

Aqueous solution.  
 Also contains substances at levels not considered to be hazardous.

- **Dangerous components:**

CAS: 7697-37-2	nitric acid	<5%
EINECS: 231-714-2	 Ox. Liq. 2, H272;  Acute Tox. 1, H330;  Met. Corr. 1, H290;            Skin Corr.	
RTECS: QU5775000	1A, H314	

- **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.  
 For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
 Immediately wash with water and soap and rinse thoroughly.  
 If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth. Do not induce vomiting.
- **4.2 Most important symptoms and effects, both acute and 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: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.

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- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose of contaminated material as waste according to item 13.  
Absorb liquid components with liquid-binding material.  
**DO NOT USE SAWDUST.**
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
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 container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

**Ingredients with limit values that require monitoring at the workplace:**

CAS: 7697-37-2 nitric acid

WEL Short-term value: 2.6 mg/m<sup>3</sup>, 1 ppm

- **Additional information:** Lists used were valid at the time of SDS preparation.

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- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - Not required.
  - Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves**
  - PVC gloves
  - Neoprene gloves
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.
- **pH-value:** < 2
- **Change in condition**

<b>Melting point/freezing point:</b>	0 °C
<b>Initial boiling point and boiling range:</b>	100 °C

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· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	Not determined.
· <b>Ignition temperature:</b>	Not determined
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Not determined.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.02374 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic at 20 °C:	0.952 mPas
Kinematic:	Not determined.
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

· **10.1 Reactivity**

Stable under normal conditions.

No further relevant information available.

· **10.2 Chemical stability** Stable under normal conditions.

· **Thermal decomposition / conditions to be avoided:**

Formation of toxic gases is possible during heating or in case of fire.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** Heat.

· **10.5 Incompatible materials:**

Strong oxidizing agents.

Metals.

· **10.6 Hazardous decomposition products:**

Formation of toxic gases is possible during heating or in case of fire.

### SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

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

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· **LD/LC50 values relevant for classification:**

**CAS: 7697-37-2 nitric acid**

Inhalative	LC50/4 h	>2.65 mg/l (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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

· **12.1 Toxicity**

· **Aquatic toxicity:**

**CAS: 7697-37-2 nitric acid**

LC50/48	180 mg/l (crustacean)
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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

· **Uncleaned packaging:**

· **Recommendation:** Dispose of in accordance with national regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN-Number</b>	UN3264
· <b>ADR, IMDG, IATA</b>	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· <b>ADR</b>	
· <b>IMDG, IATA</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Warning: Corrosive substances.
· <b>Hazard identification number (Kemler code):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	A
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>UN "Model Regulation":</b>	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III

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### SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Liq. 2: Oxidizing liquids – Category 2

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 1: Acute toxicity - inhalation – Category 1

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

· **Data compared to the previous version altered.** All sections have been updated.