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

- **1.1 Product identifier**
  - **Product name:** Nickel Standard: 10 µg/mL Ni in 2% HNO3 [100ml bottle]
  - **Part number:** 5190-8576

- **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** Reference material for laboratory use only

- **Manufacturer/Supplier:**
  - Agilent Technologies Australia Pty Ltd
  - 679 Springvale Road
  - Mulgrave
  - Victoria 3170, Australia

- **Further information obtainable from:** e-mail: pdl-msds_author@agilent.com

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

**SECTION 2: Hazards identification**

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

  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - Xi; Irritant
  - R36/38: Irritating to eyes and skin.

- **Information concerning particular hazards for human and environment:**
  - The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**
  - The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **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**

  - GHS07

- **Signal word** Warning

- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
Product name: Nickel Standard: 10 µg/mL Ni in 2% HNO3 [100ml bottle]

· Precautionary statements
  P280 Wear protective gloves/protective clothing/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.
  P321 Specific treatment (see on this label).
  P362 Take off contaminated clothing and wash before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P337+P313 If eye irritation persists: Get medical advice/attention.

· Information concerning particular hazards for human and environment:
  · Safety phrases:
    26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
    36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
    45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
    60 This material and its container must be disposed of as hazardous waste.

· 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
    EINECS: 231-714-2
    RTECS: QU5775000
    Nitric acid
    < 2.0%
    AU
    C R35; O R8
    Ox. Liq. 3, H272; Skin Corr. 1A, H314

· Additional information: For the wording of the listed risk 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: In case of unconsciousness place patient in recovery position for transport.
  · 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.
    Drink plenty of water and provide fresh air. Call for a doctor immediately.
  · 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.

(Contd. from page 1)

(Contd. on page 3)
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 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: 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. Ensure adequate ventilation. 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
  Ensure good ventilation/extraction at the workplace. Store in cool, dry place in tightly closed receptacles. Prevent formation of aerosols.
- 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:
  Store in a cool location. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle. 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

- Additional information about design of technical facilities: No further data; see item 7.
9.1 Information on basic physical and chemical properties

- General Information

- Form: Liquid
- Colour: Colourless
- Odour: Odourless
- Odour threshold: Not determined.
- pH-value at 20 °C: < 2
- Change in condition
  - Melting point/Melting range: Not determined.
  - Boiling point/Boiling range: 100 °C
**Product name:** Nickel Standard: 10 µg/mL Ni in 2% HNO₃ [100ml bottle]

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable under normal conditions.
- **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.
- **10.6 Hazardous decomposition products:**
  - Formation of toxic gases is possible during heating or in case of fire.

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### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - Acute toxicity:
  - **Primary irritant effect:**
    - on the skin: Caustic effect on skin and mucous membranes.
    - on the eye: Strong caustic effect.
  - **Sensitisation:** No sensitising effects known.
  - **Additional toxicological information:**
    - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
      - Corrosive

(Contd. on page 6)
SECTION 12: Ecological information

- 12.1 Toxicity
  - Aquatic toxicity: No further relevant information available.
- 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.

SECTION 14: Transport information

- 14.1 UN-Number
  - ADG, ADN, IMDG, IATA: Not applicable
- 14.3 Transport hazard class(es)
  - ADG, ADN, IMDG, IATA: Not applicable
  - Class: Not applicable
- 14.4 Packing group
  - ADG, IMDG, IATA: Not applicable
- 14.5 Environmental hazards:
  - Marine pollutant: No
- 14.6 Special precautions for user
  - Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.
- UN "Model Regulation": -
Product name: Nickel Standard: 10 µg/mL Ni in 2% HNO3 [100ml bottle]

(Contd. from page 6)

SECTION 15: Regulatory information

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

- Philippines Inventory of Chemicals and Chemical Substances
  All ingredients are listed.

- Australian Inventory of Chemical Substances
  All ingredients are listed.

- Standard for the Uniform Scheduling of Medicines and Poisons
  7697-37-2 Nitric acid S5, S6

· 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.

· Relevant phrases
  H272 May intensify fire; oxidiser.
  H314 Causes severe skin burns and eye damage.
  R35 Causes severe burns.
  R8 Contact with combustible material may cause fire.

· 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)
  Ox. Liq. 3: Oxidising Liquids, Hazard Category 3
  Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

· Sources