1 Identification

- **Product identifier**
- **Product Name**: Internal Standard Mix, Part Number 5183-4681
- **Part Number**: 5183-4681
- **Relevant identified uses of the substance or mixture and uses advised against**: No further relevant information available.
- **Application of the substance / the mixture**
  Analytical Chemistry
  A 100mL Solution
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Suppliers**:
  Agilent Technologies, Inc
  5301 Stevens Creek Blvd.
  Santa Clara, CA 95051 USA
- **Information department**: product safety department
- **Emergency telephone number**:
  Emergency Phone Number (24 hours)
  CHEMTREC (800-424-9300)
  Outside US: 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**

  GHS05 Corrosion

  Skin Corr. 1B H314 Causes severe skin burns and eye damage.
  Eye Dam. 1 H318 Causes serious eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

  Corrosive
  Causes burns.

- **Information concerning particular hazards for human and environment**:
  The product has to be labeled due to the calculation procedure of international guidelines.
- **Classification system**:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

  GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling**
  nitric acid
- **Hazard statements**
  Causes severe skin burns and eye damage.
- **Precautionary statements**
  Do not breathe dusts or mists.
  IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  - 7697-37-2 nitric acid 5.0%

- Chemical identification of the substance/preparation
  - 7440-69-9 bismuth 0.001%
  - 7440-56-4 Germanium from Anmonium hexafluorogermanate(IV) 0.001%
  - 7440-74-6 indium 0.001%
  - 7440-20-2 Scandium from Scandium oxide 0.001%
  - 7440-27-9 Terbium from Terbium (III,IV) oxide 0.001%
  - 7440-65-5 Yttrium from Yttrium oxide 0.001%
  - 7439-93-2 Lithium from Lithium carbonate 0.001%
  - 7732-18-5 water, distilled, conductivity or of similar purity 94.993%

4 First-aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  - After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
  - Information for Doctor:
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - Special hazards arising from the substance or mixture: No further relevant information available.
  - Advice for firefighters
  - Protective equipment: No special measures required.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Use neutralizing agent.
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- 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.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:
    |     |   |
    |----|---|
    | 7697-37-2 nitric acid |
    | PEL Long-term value: 5 mg/m³, 2 ppm |
    | REL Short-term value: 10 mg/m³, 4 ppm |
    | Long-term value: 5 mg/m³, 2 ppm |
    | TLV Short-term value: 10 mg/m³, 4 ppm |
    | Long-term value: 5.2 mg/m³, 2 ppm |
- Additional information: The lists that were valid during the creation were used as basis.
- 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 eyes and skin.
  - Breathing equipment:
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  - Protection of hands:
    - Protective gloves
      - The glove material has to be impermeable and resistant to the product/the substance/the preparation.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:** Liquid
    - **Form:** Liquid
    - **Color:** Colorless
  - **Odor:** Odorless
  - **Odour Threshold:** Not applicable.
  - **pH-value:** <2
  - **Change in condition**
    - **Melting point/Melting range:** 0 °C (32°F)
    - **Boiling point/Boiling range:** 100 °C (212°F)
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:**
    - **Decomposition temperature:** Not applicable.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - **Lower:** Not applicable.
    - **Upper:** Not applicable.
  - **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)
  - **Density:** 1.0 g/mL @ 20 °C
    - **Relative density:** Not applicable.
  - **Vapour density:** Not applicable.
  - **Evaporation rate:** Not applicable.
  - **Solubility in / Miscibility with**
    - **Water:** Miscible
  - **Partition coefficient (n-octanol/water):** Not applicable.
  - **Viscosity:**
    - **Dynamic:** Not applicable.
    - **Kinematic:** Not applicable.
  - **Solvent content:**
    - **Organic solvents:** 0.0 %
    - **Water:** 95.0 %

(Contd. of page 5)
### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **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.
    - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**
    - The product shows the following dangers according to internally approved calculation methods for preparations:
      - Corrosive
      - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
  - **Carcinogenic categories**
    - **IARC (International Agency for Research on Cancer)**
      - None of the ingredients is listed.
    - **NTP (National Toxicology Program)**
      - None of the ingredients is listed.
    - **OSHA-Ca (Occupational Safety & Health Administration)**
      - None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
    - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:**
      - Water hazard class 2 (Self-assessment): hazardous for water
      - Do not allow product to reach ground water, water course or sewage system.
      - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
      - Danger to drinking water if even small quantities leak into the ground.
    - **Results of PBT and vPvB assessment**
      - **PBT:** Not applicable.
      - **vPvB:** Not applicable.
    - **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
## 40.2.6. Uncleaned packagings:

- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>UN3264</th>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid solution)</td>
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<tr>
<td>DOT</td>
<td>3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid solution)</td>
</tr>
<tr>
<td>ADR</td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID SOLUTION)</td>
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### Transport hazard class(es)

**DOT**

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<th>Class</th>
<th>8 Corrosive substances</th>
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<tbody>
<tr>
<td>Label</td>
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**ADR, IMDG, IATA**

<table>
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</tr>
</thead>
<tbody>
<tr>
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<td>8</td>
</tr>
</tbody>
</table>

### Packing group

**DOT, ADR, IMDG, IATA**

<table>
<thead>
<tr>
<th>Packing group</th>
<th>III</th>
</tr>
</thead>
</table>

### Environmental hazards:

- **Marine pollutant:** No

### Special precautions for user

- **Warning:** Corrosive substances
- **Danger code (Kemler):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups:** Acids

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

**Not applicable.**

### Transport/Additional information:

- **ADR**
  - **Excepted quantities (EQ)**
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **IMDG**
  - **Limited quantities (LQ)**
    - Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml
  - **Excepted quantities (EQ)**
    - 1L

### UN "Model Regulation":

- UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid solution), 8, III

(Contd. on page 7)
## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - 7697-37-2 nitric acid
  - Section 313 (Specific toxic chemical listings):
    - 7697-37-2 nitric acid
    - 7439-93-2 Lithium from Lithium carbonate
  - TSCA (Toxic Substances Control Act):
    - All ingredients are listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      - None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for females:
      - None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for males:
      - None of the ingredients is listed.
    - Chemicals known to cause developmental toxicity:
      - 7439-93-2 Lithium from Lithium carbonate
  - Carcinogenic categories
    - EPA (Environmental Protection Agency)
      - None of the ingredients is listed.
    - TLV (Threshold Limit Value established by ACGIH)
      - None of the ingredients is listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      - None of the ingredients is listed.
  - GHS label elements
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms

### GHS05

#### Signal word
Danger

#### Hazard-determining components of labeling:
- nitric acid

#### Hazard statements
- Causes severe skin burns and eye damage.
- Precautionary statements
  - Do not breathe dusts or mists.
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a poison center/doctor.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

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.

- Department issuing SDS: product safety department
- Contact:
  Agilent Technologies, Inc.
  800-227-9770

- Date of preparation / last revision 05/13/2015 / -

- 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
  DOD: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
  Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1