1 Identification

- **Product identifier**
  - **Product Name:** Gold Tuning Solution, Part Number 8500-7000
  - **Part Number:** 8500-7000
  - **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/Supplier:** 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** The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
  - **Information concerning particular hazards for human and environment:** The product does not have 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 Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void
  - Classification system:
  - **NFPA ratings (scale 0 - 4)**
    - Health = 0
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - HEALTH Health = 0
    - FIRE Fire = 0
    - REACTIVITY Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**
  - 7647-01-0 hydrochloric acid 2.0%

- **Chemical identification of the substance/preparation**
  - 7440-57-3 Gold 0.01%
4 First-aid measures

- Description of first aid measures
  - General information: No special measures required.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult 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: Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- 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
    - No special measures required.
    - Follow good laboratory practices.
  - 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.
  - Further information about storage conditions: None.
  - 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:
    - 7647-01-0 hydrochloric acid
    - PEL Ceiling limit value: 7 mg/m³, 5 ppm

(Contd. on page 3)
40.2.6 REL Ceiling limit value: 7 mg/m³, 5 ppm
TLV Ceiling limit value: 2.98 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: The usual precautionary measures for handling chemicals should be followed.

· Breathing equipment: Not required.
· Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· 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: Goggles recommended during refilling.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
  Form: Liquid
  Color: Colorless
· Odor: Odorless
· Odour Threshold: Not applicable.

· pH-value: <1

· 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.
Product Name: Gold Tuning Solution, Part Number 8500-7000

Solvent content:
- Organic solvents: 0.0 %
- Water: 98.0 %
- Other information: No further relevant information available.

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.
- Incompatible materials: 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: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product is not subject to classification according to internally approved calculation methods for preparations:
  When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    7647-01-0 hydrochloric acid
  - 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: Generally not hazardous for water
  - 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: Smaller quantities can be disposed of with household waste.
## 14 Transport information

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<tr>
<th>DOT, ADR, IMDG, IATA</th>
<th>UN1789</th>
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<tbody>
<tr>
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<tr>
<td>UN proper shipping name</td>
<td>Hydrochloric acid</td>
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<tr>
<td>DOT</td>
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<td>Class</td>
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<tr>
<td>Label</td>
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<tr>
<td>Packing group</td>
<td>DOT, ADR, IMDG, IATA</td>
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<tr>
<td>Class</td>
<td>III</td>
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<td>Special precautions for user</td>
<td>Warning: Corrosive substances</td>
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<td>Segregation groups</td>
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<td>IMDG</td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
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<td>Limited quantities (LQ)</td>
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<td>Excepted quantities (EQ)</td>
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</table>
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
  - Section 355 (extremely hazardous substances):
    - 7647-01-0 hydrochloric acid
- **Section 313 (Specific toxic chemical listings):**
  - 7647-01-0 hydrochloric acid
- **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:
    - None of the ingredients is listed.
- **Carcinogenic categories**
  - EPA (Environmental Protection Agency)
    - None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    - 7647-01-0 hydrochloric acid
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    - None of the ingredients is listed.
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **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
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - 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)