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 Manufacturing GmbH & Co. KG
  Hewlett-Packard-Str. 8
  76337 Waldbronn
  Germany
- **Information department:** product safety department
- **Emergency telephone number:** CHEMTREC®: 1-800-815-308

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
  - GHS label elements: Void
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements: Void
  - 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%
  - 7440-57-5 Gold 0.01%
  - 7732-18-5 water, distilled, conductivity or of similar purity 97.99%
- **Chemical identification of the substance/preparation**

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.
  - **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.

(Contd. on page 2)
41.2.4 · 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.
- 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 (Malaysia): Ceiling limit value: 7.5 mg/m³, 5 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 cannot 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.

(Contd. on page 3)
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** Liquid
    - **Color:** Colorless
    - **Odor:** Odorless
    - **Odour Threshold:** Not applicable.
  - **pH-value:** < 1
  - **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.
  - **Decomposition temperature:** Not applicable.
  - **Auto igniting:** Product is not selfigniting.
  - **Explosion limits:**
    - **Lower:** Not applicable.
    - **Upper:** Not applicable.
  - **Vapor pressure at 20 °C:** 23 hPa
  - **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:** 98.0 %
  - **Other information**
    - No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **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)
    - 7647-01-9 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.
- Uncleaned Packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: UN1789
- UN proper shipping name
  - DOT: Hydrochloric acid
  - ADR: 1789 Hydrochloric acid
  - IMDG, IATA: HYDROCHLORIC ACID
### Transport hazard class(es)

**DOT**

- **Class**: 8
- **Label**: Corrosive substances

**ADR, IMDG, IATA**

- **Class**: 8
- **Label**: Corrosive substances

**Packing group**

- **DOT, ADR, IMDG, IATA**: III

### 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)**: 5L
  - **Excepted quantities (EQ)**: Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation"**: UN 1789 HYDROCHLORIC ACID, 8, III, (E)

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 313 (Specific toxic chemical listings)**:
      - 7647-01-0 hydrochloric acid
  - **SARA**
    - **Section 311 (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.
41.2.4

· 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 A4
  - 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 Manufacturing GmbH & Co. KG
  0800 603 1000
  pdl-msds_author@agilent.com
· 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
  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)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
  STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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