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

1.1 Product identifier

Product name: Zirconium Standard: 1000 µg/g Zr in 75 cSt Hydrocarbon Oil [50g bottle]

Part number: 5190-8799

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

health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

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

Xn: Harmful

R65: Harmful: may cause lung damage if swallowed.

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

GHS08

Signal word Danger

Hazard-determining components of labelling:

White mineral oil

Hazard statements

H304 May be fatal if swallowed and enters airways.

Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

(Contd. on page 2)
Product name: Zirconium Standard: 1000 µg/g Zr in 75 cSt Hydrocarbon Oil [50g bottle]

(Contd. from page 1)

P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Information concerning particular hazards for human and environment:

Safety phrases:
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
36 Wear suitable protective clothing.
60 This material and its container must be disposed of as hazardous waste.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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: Also contains substances at levels not considered to be hazardous.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 8042-47-5</th>
<th>White mineral oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 232-455-8</td>
<td>Xn R65</td>
</tr>
<tr>
<td>RTECS: PY8047000</td>
<td>Asp. Tox. 1, H304</td>
</tr>
</tbody>
</table>

> 95%

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

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing:
Rinse mouth. Do not induce vomiting.
Seek immediate medical advice.

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.

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 clothing.

(Contd. on page 3)
**Product name:** Zirconium Standard: 1000 µg/g Zr in 75 cSt Hydrocarbon Oil [50g bottle]

**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: None.
- **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.
- **8.1 Control parameters**
  - Ingredients with limit values that require monitoring at the workplace:
    - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: Lists used were valid at the time of SDS preparation.
- **8.2 Exposure controls**
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Wash hands before breaks and at the end of work.
  - Respiratory protection:
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
    - Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
  - Protection of hands:
    - Chemical-resistant, impervious gloves with an approved standards should be worn at all times.
The selection of the glove material is based on the penetration times, rates of diffusion and its degradation.

Protective gloves

- **Material of gloves**: Natural rubber, NR
- **Penetration time of glove material**: The protection time of the gloves cannot be accurately estimated for mixtures consisting of several substances. Refer to and observe manufacturers break through times of the protective gloves.
- **Eye protection**: Safety glasses

### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

- **General Information**
  - **Appearance**: Oily
  - **Colour**: Light brown
  - **Odour**: Mineral-oil-like
  - **Odour threshold**: Not determined.
  - **pH-value**: Not determined.
  - **Change in condition**
    - **Melting point/Melting range**: Not determined.
    - **Boiling point/Boiling range**: 218 °C
  - **Flash point**: 115 °C
  - **Flammability (solid, gaseous)**: Not determined.
  - **Ignition temperature**:
    - **Decomposition temperature**: Not determined.
  - **Self-igniting**: Product is not self-igniting.
  - **Danger of explosion**: Not determined.
  - **Explosion limits**:
    - **Lower**: Not determined.
    - **Upper**: Not determined.
  - **Vapour pressure**: Not determined.
  - **Density at 20 °C**: 0.862 g/cm³
  - **Relative density**: Not determined.
  - **Vapour density**: Not determined.
  - **Evaporation rate**: Not determined.
  - **Solubility in / Miscibility with water**: Not miscible or difficult to mix.
  - **Partition coefficient (n-octanol/water)**: Not determined.
  - **Viscosity**:
    - **Dynamic**: Not determined.
    - **Kinematic**: Not determined.
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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity**:
    - **LD/LC50 values relevant for classification**:
      - 8042-47-5 White mineral oil
      - Oral LD50 > 5000 mg/kg (rat)
  - **Primary irritant effect**:
    - **on the skin**: No irritating effect.
    - **on the eye**: No irritating 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:

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.
  - **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.
**Product name:** Zirconium Standard: 1000 µg/g Zr in 75 cSt Hydrocarbon Oil [50g bottle]

(Contd. from page 5)

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

### 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

- **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":** -

### 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**
    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.

- **Relevant phrases**
  - H304 May be fatal if swallowed and enters airways.
  - R65 Harmful: may cause lung damage if swallowed.

- **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

(Contd. on page 7)
**Product name:** Zirconium Standard: 1000 µg/g Zr in 75 cSt Hydrocarbon Oil [50g bottle]

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>Globally Harmonised System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (division of the American Chemical Society)</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal concentration, 50 percent</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal dose, 50 percent</td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>Aspiration hazard, Hazard Category 1</td>
</tr>
</tbody>
</table>

**Sources**