1 Identification

· Product identifier

· Trade name: delta9-Tetrahydrocannabinolic acid (THCA) Standard -1mL

· Part number: 5191-3925

· Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use

· Details of the supplier of the safety data sheet

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

· Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com

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

2 Hazard(s) Identification

· Classification of the substance or mixture
  
  🟡 Flammable
  Flam. Liq. 2 H225 Highly flammable liquid and vapour.

  🚨 Acute Tox. 4 H302 Harmful if swallowed.
  Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements
  · GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  · Hazard pictograms

  🟡 GHS02
  🚨 GHS07

· Signal word Danger

· Hazard-determining components of labelling:
  acetonitrile

· Hazard statements
  Highly flammable liquid and vapour.
  Harmful if swallowed.
  Causes serious eye irritation.

· Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.

(Contd. on page 2)
Trade name: delta9-Tetrahydrocannabinolic acid (THCA) Standard -1mL

Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
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.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition and Information on Ingredients

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

- Dangerous components:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-05-8 acetonitrile</td>
<td></td>
<td>99.8728%</td>
</tr>
<tr>
<td>23978-85-0 delta(9)-tetrahydrocannabinolic acid</td>
<td></td>
<td>0.1272%</td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately rinse with water.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Call for a doctor immediately.

(Contd. on page 3)
5 Fire Fighting Measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, 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:
  Dilute with plenty of water.
  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).
  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 No special precautions are necessary if used correctly.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  Requirements to be met by storerooms and receptacles: Store in a cool location.
  Information about storage in one common storage facility: Not required.
  Further information about storage conditions:
  Keep container tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.
8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>75-05-8 acetonitrile</th>
</tr>
</thead>
<tbody>
<tr>
<td>WES</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- **Additional information:** The lists valid during the making 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.
  Avoid contact with the eyes and skin.

- **Respiratory protection:**
  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipment with appropriate organic or acid gas cartridge.

- **Protection of hands:**
  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr.
  For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs.
  Supplier recommendations should be followed.

- **Material of gloves**
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness

- **Penetration time of glove material**
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: > 4 hours

- **Eye protection:**
  Tightly sealed goggles

9 Physical and Chemical Properties

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

- **General Information**

- **Appearance:**
  Form: Fluid
## Trade name: delta9-Tetrahydrocannabinolic acid (THCA) Standard -1mL

### 5.0 Safety and Health Information

#### 5.1 Classification of hazards

**Risk Phrases:**
- R36/37/38: Irritating to eyes, respiratory system and skin.
- R36/37: Irritating to eyes and respiratory system.
- R41: May cause irreversible eye damage.
- R42/43: Harmful if inhaled.

**Hazard Statements:**
- H315: CAUTION! Irritating to eyes.· H319: CAUTION! Irritating to skin.
- H336: CAUTION! May cause respiratory irritation.
- H318: CAUTION! May cause skin irritation.
- H338: CAUTION! May cause an allergic skin reaction.

### 5.2 Precautionary Statements

#### 5.2.1.2 PPE: Use eye/face protection and respiratory protection.

#### 5.2.1.4 PPE: Use a respiratory protection device with a dust/mist filter, and appropriate protective equipment approved in accordance with local or national regulations.

### 5.3 First Aid Measures

#### 5.3.1.3 Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 5.3.1.4 Skin Contact: If on skin: Wash with plenty of water and soap.·

#### 5.3.1.7 Inhalation: If swallowed: Call a POISON CENTER or doctor/physician immedi-ately.·

### 5.4 Fire-Fighting Measures

#### 5.4.1.1 Flammability: Product is not flammable.·

#### 5.4.1.2 Extinguishing Media: Water is the preferred extinguishing medium.

### 5.5 Spill Response

#### 5.5.1.2 Spillage Control: Wear appropriate protective equipment, including...·

### 5.6 Stability and Reactivity

#### 5.6.1 Stability:

- Stable at room temperature.

#### 5.6.2 Reactivity:

- Stable under normal conditions.·

#### 5.6.3 Incompatibility:

- Product is not self-igniting.·

### 5.7 Disposal

#### 5.7.1 Disposal of Wastes:

- Disposal must be in accordance with local and national regulations.

### 5.8 Transport Information

- UN number: Not applicable.
- Risk class:
  - 3: Flammable solid.
- Packaging group: Not applicable.
- Special requirements: Not applicable.

### 5.9 Ecological Information

- Biodegradability: Fully biodegradable.
- Persistence in the environment: Not persistent.
- Adsorption to soil: Not adsorbed.

### 6.0 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td>pH-value</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-46 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>81 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>2 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>525 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Product is not self-igniting.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>4.4 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>16 Vol %</td>
</tr>
<tr>
<td>Vapour pressure at 20 °C</td>
<td>0 hPa</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>0.786 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water</td>
<td>Fully miscible.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic at 20 °C</td>
<td>0.39 mPas</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solvent content</td>
<td></td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>0.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

---

**Note:** The information provided is for TaylorMade Products and is subject to change. Always refer to the most current SDS for the latest safety and handling information.
50.1.9 · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

· Information on toxicological effects
· Acute toxicity

· LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>ATE (Acute Toxicity Estimates)</th>
<th>Oral</th>
<th>LD50 1,322 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50 &gt;2,003 mg/kg (rabbit)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h 3,592 mg/L (mouse)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>75-05-8 acetonitrile</th>
<th>Oral</th>
<th>LD50 1,320 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50 &gt;2,000 mg/kg (rabbit)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h 3,587 mg/L (mouse)</td>
<td></td>
</tr>
</tbody>
</table>

· Primary irritant effect:
· Skin corrosion/irritation No irritant effect.
· Serious eye damage/irritation Irritating effect.
· Respiratory or skin 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:
Harmful
Irritant

12 Ecological Information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability No further relevant information available.
· Behaviour 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 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
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 together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.
  - **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **Not Regulated, De minimus Quantities**

- **UN-Number**
  - ADG, IMDG, IATA
  - UN1648

- **UN proper shipping name**
  - ADG
  - IMDG, IATA
  - 1648 ACETONITRILE

- **Transport hazard class(es)**
  - ADG, IMDG, IATA
  - Class
    - 3 Flammable liquids.
  - Label
    - 3

- **Packing group**
  - ADG, IMDG, IATA
  - II

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - **Warning:** Flammable liquids.
  - **Hazard identification number (Kemler code):** 33
  - **EMS Number:** 3-02
  - **Stowage Category**
    - B
  - **Stowage Code**
    - SW2 Clear of living quarters.

- **Transport in bulk according to Annex II of Marpol and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - **ADG**
    - **Limited quantities (LQ):** 1L
    - **Excepted quantities (EQ) Code:** E2
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 500 ml
  - **Transport category**
    - 2
Trade name: delta9-Tetrahydrocannabinolic acid (THCA) Standard -1mL

- Tunnel restriction code: D/E
- IMDG
  - Limited quantities (LQ): 1L
    - Code: E2
  - Excepted quantities (EQ)
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml
- UN "Model Regulation": UN 1648 ACETONITRILE, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    - 75-05-8 acetonitrile
  - Standard for the Uniform Scheduling of Medicines and Poisons
    - None of the ingredients is listed.
  - Australia: Priority Existing Chemicals
    - None of the ingredients is listed.
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category
    - P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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
  - H225 Highly flammable liquid and vapour.
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.
  - H319 Causes serious eye irritation.
  - H332 Harmful if inhaled.
  - H361 Suspected of damaging fertility or the unborn child.

- 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
  - 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)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 2: Flammable liquids – Category 2
Trade name: delta9-Tetrahydrocannabinolic acid (THCA) Standard -1mL

Acute Tox. 4: Acute toxicity - oral – Category 4
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Repr. 2: Reproductive toxicity – Category 2