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

- Product identifier
- Trade name: 1H,1H,2H,2H-perfluordecan-1-ol
- Part number: N-1817, N-1817-100MG
- CAS Number: 678-39-7
- EC number: 211-648-0
- Relevant identified uses of the substance or mixture and uses advised against
  - Reagents and Standards for Analytical Chemical Laboratory Use

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

⚠️

GHS07

Skin Irrit. 2  H315  Causes skin irritation.
Eye Irrit. 2  H319  Causes serious eye irritation.
STOT SE 3  H335  May cause respiratory irritation.

- Labelling according to Regulation (EC) No 1272/2008
  - The substance is classified and labelled according to the CLP regulation.
- Hazard pictograms

⚠️

GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  - 1H,1H, 2H, 2H-Heptadecafluoro-n-decanol
- Hazard statements
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H335 May cause respiratory irritation.
Trade name: 1H,1H,2H,2H-perfluorodecan-1-ol

· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P264 Wash thoroughly after handling.
  P271 Use only outdoors or in a well-ventilated area.
  P280 Wear protective gloves / eye protection / face protection.
  P302+P352 IF ON SKIN: Wash with plenty of water.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P337+P313 If eye irritation persists: Get medical advice/attention.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Substances
  · CAS No. Description
    678-39-7 1H,1H, 2H, 2H-Heptadecafluoro-n-decanol
  · Identification number(s)
    · EC number: 211-648-0

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. If symptoms persist, consult a doctor.
· 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 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 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: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up: 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.
  - Information about fire - and explosion protection: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storeroms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/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: Not required.
- 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 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
**Trade name: 1H,1H,2H,2H-perfluorodecan-1-ol**

- 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
  - 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.

- 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

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### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Solid</td>
</tr>
<tr>
<td>Colour: Not determined.</td>
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<tr>
<td>Odour: Characteristic</td>
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<tr>
<td>Odour threshold: Not determined.</td>
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<tr>
<td>pH-value: Not applicable.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in condition</th>
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</thead>
<tbody>
<tr>
<td>Melting point/freezing point: 50 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range: 112 °C</td>
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</tbody>
</table>

| Flash point: >110 °C                                 |
| Flammability (solid, gas): Product is not flammable. |
| Decomposition temperature: Not determined.           |
| Auto-ignition temperature: Not determined.           |

| Explosive properties: Product does not present an explosion hazard. |

<table>
<thead>
<tr>
<th>Explosion limits:</th>
</tr>
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<tbody>
<tr>
<td>Lower: Not determined.</td>
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<tr>
<td>Upper: Not determined.</td>
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</table>

| Vapour pressure: Not applicable. |
| Density: Not determined. |

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Trade name: 1H,1H,2H,2H-perfluordecan-1-ol

- Relative density: Not determined.
- Vapour density: Not applicable.
- Evaporation rate: Not applicable.

- Solubility in / Miscibility with water: Insoluble.
- Partition coefficient: n-octanol/water: Not determined.

- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.

- Solvent content:
  - VOC (EC) 0.00 %

- Solids content: 100.0 %
- 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: Based on available data, the classification criteria are not met.
  - Primary irritant effect:
  - Skin corrosion/irritation: Causes skin irritation.
  - Serious eye damage/irritation: Causes serious eye irritation.
  - Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: May cause respiratory irritation.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.
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 1 (German Regulation) (Assessment by list): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- 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.
- European waste catalogue
  - HP 4 Irritant - skin irritation and eye damage
  - HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, ADN, IMDG, IATA not regulated
- UN proper shipping name
  - ADR, ADN, IMDG, IATA not regulated
- Transport hazard class(es)
  - ADR, ADN, IMDG, IATA
    - Class not regulated
- Packing group
  - ADR, IMDG, IATA not regulated
- Environmental hazards:
  - Not applicable.
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.
Trade name: 1H,1H,2H,2H-perfluorodecan-1-ol

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- 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.

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
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3