1 Identification

- Product identifier

- Trade name: 2,3,4,5-Tetrachlorobiphenyl (BZ-61)

- Part number: RPC-027

- CAS Number: 33284-53-6

- EC number: 215-648-1

- Index number: 602-039-00-4

- Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use

- 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:
  Telephone: 800-227-9770
  e-mail: pdl-msds_author@agilent.com

- Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

- Classification of the substance or mixture

  GHS08 Health hazard

  STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- Label elements

- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms

  GHS08

- Signal word Warning

- Hazard-determining components of labeling:
  2,3,4,5-tetrachlorobiphenyl

- Hazard statements
  May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Get medical advice/attention if you feel unwell.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
4 First-aid measures

- Description of first aid measures
  - General information:
    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: 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: Use fire fighting measures that suit the environment.
  - Special hazards arising from the substance or mixture
    During heating or in case of fire poisonous gases are produced.
Trade name: 2,3,4,5-Tetrachlorobiphenyl (BZ-61)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Mount respiratory protective device.
- **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.
- **Protective Action Criteria for Chemicals**
  - **PAC-1**: Substance is not listed.
  - **PAC-2**: Substance is not listed.
  - **PAC-3**: Substance is not listed.

7 Handling and storage

- **Handling**:
  - **Precautions for safe handling**: Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires**: Keep respiratory protective device available.
- **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**:
    - The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
    - The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
    - At this time, the remaining constituent has no known exposure limits.
    - At this time, the other constituents have no known exposure limits.
  - **Additional information**: The lists that were valid during the creation were used as basis.
Trade name: 2,3,4,5-Tetrachlorobiphenyl (BZ-61)

暴露控制
- 个人防护装备:
  - 一般防护和卫生措施:
    保持远离食品、饮料和饲料。工作结束和休息前洗手。
    存放防护服分开。
  - 呼吸保护设备:
    当使用Agilent仪器时，在正常实验室条件下和
    标准实践下，产品不会导致显著的空气暴露，因此呼吸保护
    不需要。
    在紧急情况下，如果必要，使用NIOSH或等效
    认可的设备/设备，带有合适的有机或酸气筒。
  - 手保护:
    尽管不推荐用于化学品的持续接触或清洁，
    11-13 mil厚度的丁腈手套推荐用于正常
    使用。对于直接与化学物质接触
    的清洁，12-15 mil厚度的丁基橡胶手套
    推荐超过4小时的穿透时间。
  - 材料手套
    对于正常使用：丁腈橡胶，11-13 mil厚度
    对于直接接触化学品：丁基橡胶，12-15 mil厚度
    选择适合的手套不仅取决于材料，
    而且还取决于质量的进一步标志
    并且可能根据制造商而不同。
  - 穿刺时间
    对于正常使用：丁腈橡胶：1小时
    对于直接接触化学品：丁基橡胶：>4小时
  - 眼部保护:
    紧闭式护目镜

* 9 物理和化学性质

- 信息基本物理和化学性质
- 一般信息
  - 外观: 固体
  - 颜色: 未确定。
  - 气味: 特征
  - 气味阈值: 未确定。
  - pH值: 不适用。
- 变化状态
  - 熔点/凝固范围: 未确定。
  - 沸点/沸点范围: 未确定。
  - 闪点: 不适用。
  - 易燃性(固体，气体): 产品不燃。

(Contd. on page 5)
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.
Trade name: 2,3,4,5-Tetrachlorobiphenyl (BZ-61)

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:
    Water hazard class 3 (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    Danger to drinking water if even extremely 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 of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN3432

- UN proper shipping name
  - DOT: Polychlorinated biphenyls, solid
  - IMDG: POLYCHLORINATED BIPHENYLS, SOLID, MARINE POLLUTANT
  - IATA: POLYCHLORINATED BIPHENYLS, SOLID
<table>
<thead>
<tr>
<th><strong>Transport hazard class(es)</strong></th>
<th>DOT, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>Label</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>DOT, IMDG, IATA</td>
</tr>
<tr>
<td><strong>II</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td>Product contains environmentally hazardous substances: Aroclor 1268 (PCB 1268)</td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>Symbol (fish and tree)</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Warning: Miscellaneous dangerous substances and articles</td>
</tr>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
<td>90</td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
<td>F-A,S-A</td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
<td>A</td>
</tr>
<tr>
<td><strong>Segregation Code</strong></td>
<td>SG50 Segregation from foodstuffs as in 7.3.4.2.1, 7.6.3.1.2 or 7.7.3.6.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport/Additional information:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Quantity limitations</strong></td>
<td>On passenger aircraft/rail: 100 kg</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Limited quantities (LQ)</strong></td>
<td>1 kg</td>
</tr>
<tr>
<td><strong>Excepted quantities (EQ)</strong></td>
<td>Code: E2</td>
</tr>
<tr>
<td><strong>UN &quot;Model Regulation&quot;:</strong></td>
<td>UN 3432 POLYCHLORINATED BIPHENYLS, SOLID, 9, II, ENVIRONMENTALLY HAZARDOUS</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances):** Substance is not listed.
    - **Section 313 (Specific toxic chemical listings):** Substance is not listed.
  - **TSCA (Toxic Substances Control Act):** Substance is not listed.
  - **TSCA new (21st Century Act):** 33284-53-6 2,3,4,5-tetrachlorobiphenyl
  - **Proposition 65**
    - **Chemicals known to cause cancer:** Substance is not listed.
    - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
    - **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
  - **Chemicals known to cause developmental toxicity:** Substance is not listed.
  - **Carcinogenic categories**
    - **EPA (Environmental Protection Agency)** Substance is not listed.
    - **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
    - **NIOSH-Ca (National Institute for Occupational Safety and Health)** 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.

- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Date of preparation / last revision** 03/25/2019 / 1
- **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
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
Trade name: 2,3,4,5-Tetrachlorobiphenyl (BZ-61)