1 Identification

- Product identifier
- Trade name: Pentachlorobenzene
- Part number: RCP-030
- CAS Number: 608-93-5
- EC number: 210-172-0
- Index number: 602-074-00-5
- 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 solid.
  GHS02

  Flammable solid.

  !

Acute Tox. 4 H302 Harmful if swallowed.

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

  GHS02
  GHS07

- Signal word Danger

- Hazard-determining components of labelling:
  pentachlorobenzene
- Hazard statements
  Flammable solid.
Harmful if swallowed.

- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
  - Read label before use.
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting equipment.
  - 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.
  - 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 and Information on Ingredients

- **Chemical characterisation:** Substances
- **CAS No. Description**
  - 608-93-5 pentachlorobenzene
- **Identification number(s)**
  - EC number: 210-172-0
  - Index number: 602-074-00-5

### 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:** Call for a doctor immediately.
  - **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 extinguishing methods suitable to surrounding conditions.
  - **Special hazards arising from the substance or mixture**
    - No further relevant information available.
Trade name: Pentachlorobenzene

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  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: 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: 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 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: 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.
    Wash hands before breaks and at the end of work.
  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
  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:** Not required.

### 9 Physical and Chemical Properties

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

- **General Information**
  - **Appearance:**
    - Form: Solid
    - Colour: Not determined.
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.

- **Change in condition**
  - Melting point/freezing point: 85-86 °C
  - Initial boiling point and boiling range: 275-277 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Product is not flammable.

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:** Not determined.

- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.

- **Vapour pressure:** Not applicable.

- **Density at 20 °C:** 1.609 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not applicable.
  - Evaporation rate: Not applicable.

- **Solubility in / Miscibility with water:** Insoluble.
Safety Data Sheet  
according to WHS Regulations

Trade name: Pentachlorobenzene

- 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
- LD/LC50 values relevant for classification:
  - ATE (Acute Toxicity Estimates)
    - Oral LD50 1,080 mg/kg (rat)
    - Dermal LD50 >2,500 mg/kg (rat)

608-93-5 pentachlorobenzene

- Oral LD50 1,080 mg/kg (rat)
- Dermal LD50 >2,500 mg/kg (rat)

- Primary irritant effect:
  - Skin corrosion/irritation No irritant effect.
  - Serious eye damage/irritation No irritating effect.
  - Respiratory or skin sensitisation No sensitising effects known.

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 3 (German Regulation) (Assessment by list): 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 together with household garbage. Do not allow product to reach sewage system.
• Uncleaned packaging:
  • Recommendation: Disposal must be made according to official regulations.

14 Transport information

• UN-Number
  • ADG, IMDG, IATA UN3077
• UN proper shipping name
  • ADG 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (pentachlorobenzene)
  • IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (pentachlorobenzene), MARINE POLLUTANT
  • IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (pentachlorobenzene)
• Transport hazard class(es)
  • ADG, IMDG, IATA
    • Class 9 Miscellaneous dangerous substances and articles.
    • Label 9
• Packing group
  • ADG, IMDG, IATA III
• Environmental hazards:
  Product contains environmentally hazardous substances:
  pentachlorobenzene
• Marine pollutant:
  Symbol (fish and tree)
• Special marking (ADG):
  Symbol (fish and tree)
Trade name: Pentachlorobenzene

<table>
<thead>
<tr>
<th>· Special marking (IATA):</th>
<th>Symbol (fish and tree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Special precautions for user</td>
<td>Warning: Miscellaneous dangerous substances and articles.</td>
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<tr>
<td>· Danger code (Kemler):</td>
<td>90</td>
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<tr>
<td>· EMS Number:</td>
<td>F-A,S-F</td>
</tr>
<tr>
<td>· Stowage Category</td>
<td>A</td>
</tr>
<tr>
<td>· Stowage Code</td>
<td>SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</td>
</tr>
<tr>
<td>· Transport in bulk according to Annex II of Marpol and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>· ADG</td>
<td></td>
</tr>
<tr>
<td>· Limited quantities (LQ)</td>
<td>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</td>
</tr>
<tr>
<td>· Excepted quantities (EQ)</td>
<td></td>
</tr>
<tr>
<td>· Transport category</td>
<td>3</td>
</tr>
<tr>
<td>· IMDG</td>
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</tr>
<tr>
<td>· Limited quantities (LQ)</td>
<td>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</td>
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<tr>
<td>· Excepted quantities (EQ)</td>
<td></td>
</tr>
<tr>
<td>· UN &quot;Model Regulation&quot;:</td>
<td>UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PENTACHLOROBENZENE), 9, III</td>
</tr>
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</table>

15 Regulatory information

| · Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| · Australian Inventory of Chemical Substances | Substance is listed. |
| · Standard for the Uniform Scheduling of Medicines and Poisons | Substance is not listed. |
| · Directive 2012/18/EU | |
| · Named dangerous substances - ANNEX I Substance is not listed. | |
| · Seveso category E1 Hazardous to the Aquatic Environment | |
| · Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t | |
| · Qualifying quantity (tonnes) for the application of upper-tier requirements 200 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.

(Contd. on page 8)
Trade name: Pentachlorobenzene

- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.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
  - EINECS: European Inventory of Existing Commercial 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. Sol. 1: Flammable solids – Category 1
  - Acute Tox. 4: Acute toxicity – Category 4