MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Health Hazard: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fire Hazard: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

Product code: D1184
Product Name: 2,4-Dichloro-3,5-dimethylphenol
Chemical Name: No information available
Synonyms: 2,4-Dichloro-3,5-xylenol
          Benzene, 2,4-Dichloro-1,3-Dimethyl-5-hydroxy
          Dichloroxylene
          Phenol, 2,4-Dichloro-3,5-Dimethyl-
          3,5-Xylenol, 2,4-Dichloro-
          Decasept
          Dixol
          Prinsyl
          Hewsol

Recommended use: Bacteriostat.
CAS #: 133-53-9
Formula: C8-H8-Cl2-O
RTECS #: Not available
CI#: Not available
Supplier: Spectrum Chemicals and Laboratory Products, Inc.
          14422 South San Pedro St.
          Gardena, CA 90248
          (310) 516-8000
Order Online At: https://www.spectrumchemical.com
Emergency Telephone Number: CHEMTREC: 1-800-424-9300
Contact Person: Regina Wachenheim (East Coast)
Contact Person: Martin LaBenz (West Coast)

2. HAZARDS IDENTIFICATION
2. HAZARDS IDENTIFICATION

2.1 Chronic Potential Health Effects:
Component Carcinogen Status: 2,4-Dichloro-3,5-dimethylphenol 133-53-9 (100) No information available

Target Organs: No information available
Mutagenic Effects: No information available
Teratogenic Effects: No information available
Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>133-53-9</td>
<td>100</td>
</tr>
</tbody>
</table>

Product code: D1184
Product name: 2,4-Dichloro-3,5-dimethylphenol
4. FIRST AID MEASURES

General Advice: Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126).

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F): No information available.

Flash Point Tested according to: Not available

Lower Explosion Limit (%): No information available

Upper Explosion Limit (%): No information available

Autoignition Temperature (°C/°F): No information available

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide; Nitrogen oxides

Specific hazards: May be combustible at high temperatures. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. During processing, dust may form explosive mixture in air..

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Specific Methods: No information available.

6. ACCIDENTAL RELEASE MEASURES

Product code: D1184

Product name: 2,4-Dichloro-3,5-dimethylphenol
Personal Precautions:
Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental Precautions:
No information available.

Methods for Cleaning Up:
Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

### 7. HANDLING AND STORAGE

**Handling**

**Technical Measures/Precautions:**
Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

**Safe Handling Advice:**
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

**Storage**

**Technical Measures/Storage Conditions:**
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures to reduce exposure:**
Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protective Equipment**

- **Eye protection:** Safety glasses. Safety glasses with side-shields.
- **Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- **Respiratory protection:** Effective dust mask. Wear respirator with dust filter.
- **Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

**National occupational exposure limits**

**United States**

**U.S Occupational Exposure Limits:** Not determined
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Appearance:</th>
<th>Color:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>Taste</td>
<td>Molecular/Formula weight:</td>
</tr>
<tr>
<td>No information available</td>
<td>No information available</td>
<td>191.05</td>
</tr>
<tr>
<td>Flash point (°C):</td>
<td>Lower Explosion Limit (%):</td>
<td>Upper Explosion Limit (%):</td>
</tr>
<tr>
<td>Not applicable</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F):</td>
<td>Melting point/range(°C/°F):</td>
<td>Boiling point/range(°C/°F):</td>
</tr>
<tr>
<td>No information available</td>
<td>95-96 °C/203-204.8 °F</td>
<td>No information available</td>
</tr>
<tr>
<td>pH:</td>
<td>Decomposition temperature(°C/°F):</td>
<td>Specific gravity:</td>
</tr>
<tr>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Density (g/cm³):</td>
<td>Bulk density:</td>
<td>Vapor pressure @ 20°C (kPa):</td>
</tr>
<tr>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Vapor density:</td>
<td>VOC content (g/L):</td>
</tr>
<tr>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold (ppm):</td>
<td>Partition coefficient (n-octanol/water):</td>
<td>Miscibility:</td>
</tr>
<tr>
<td>No information available</td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

**Solubility:**
Solubility in Water: 1 part in 5000 parts water

### 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions

**Conditions to avoid:** Heat. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous decomposition products:

Possibility of Hazardous Reactions:
No information available

Polymerization:
Hazardous polymerisation does not occur

Corrosivity:
No information available

Special Remarks on Corrosivity:
No information available

### 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity

Component Information

2,4-Dichloro-3,5-dimethylphenol - 133-53-9
- **LD50/oral/rat** = No information available
- **LD50/oral/mouse** = No information available
- **LD50/dermal/rat** = No information available
- **LD50/dermal/rabbit** = No information available
- **LC50/inhalation/rat** = No information available
- **LC50/inhalation/mouse** = No information available
- **Other LD50 or LC50 information** = No information available

Product Information

- **LC50/inhalation/rat** No information available
- **LC50/Inhalation/mouse** No information available
- **LD50/dermal/rabbit** No information available
- **LD50/dermal/rat** No information available
- **LD50/oral/mouse** = No information available
- **LD50/oral/rat** = No information available

Local Effects

- **Skin irritation:** May cause skin irritation.
- **Eye irritation:** Causes eye irritation.
- **Inhalation:** May cause irritation of respiratory tract.
- **Ingestion:** No information available. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
- **Sensitization:** No information available

Chronic Toxicity

- **Chronic Toxicity** No information available.
- **Carcinogenic effects:** No information available.

<table>
<thead>
<tr>
<th>Components</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA HCS - Carcinogens</th>
<th>ACGIH - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
</tr>
</thead>
</table>

**Product code:** D1184 **Product name:** 2,4-Dichloro-3,5-dimethylphenol
2,4-Dichloro-3,5-dimethylphenol | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed

Mutagenic Effects: No information available
Reproductive Effects: No information available
Teratogenic Effects: No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

ECOTOXICITY
Toxicity to terrestrial and aquatic plants and animals: No information available
Ecotoxicity effects: No data available.
Aquatic toxicity: No information available
Mobility: No information available
Persistence and degradability: No information available
Bioaccumulative potential: No information available

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN-No: Not regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: None
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: No information available
DOT RQ (lbs): No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

Product code: D1184
Product name: 2,4-Dichloro-3,5-dimethylphenol
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>Present</td>
<td>Not present</td>
<td>Not present</td>
<td>Present (3)-989</td>
<td>Not present</td>
<td>Present</td>
<td>Present 205-109-9</td>
</tr>
</tbody>
</table>

U.S. Regulations

Product code: D1184  
Product name: 2,4-Dichloro-3,5-dimethylphenol

Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</tr>
</tbody>
</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) -Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Canada

WHMIS hazard class:
D2B  Toxic materials

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>Present</td>
<td>Not Listed</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-Dichloro-3,5-dimethylphenol</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

EU Classification

R-phrase(s)
R36/38 - Irritating to eyes and skin.

S-phrase(s)
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 - Wear suitable gloves.

Product code: D1184  Product name: 2,4-Dichloro-3,5-dimethylphenol
The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xi - Irritant.

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

Preparation Date: 24-Jun-2013
Reason for revision: Not applicable
Prepared by: Sonia Owen
Literature reference: No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

Product code: D1184
Product name: 2,4-Dichloro-3,5-dimethylphenol