1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name: Resorcinol
Product Code: SC-203371

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Oral: Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2

Label elements
Signal word: Warning
Hazard statements:
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
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.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Emergency telephone number
Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

Details of the supplier of the safety data sheet
Santa Cruz Biotechnology, Inc.
10410 Finnell Street
Dallas, TX 75220
831.457.3800
800.457.3801
scbt@scbt.com

Revision date
16-Jul-2015

Version
1.2
Hazard not otherwise classified (HNOC)

Other Information

### NFPA
- Health hazards: 2
- Flammability: 1
- Stability: 0
- Physical and chemical properties: -

### HMIS
- Health hazards: 2
- Flammability: 1
- Physical hazards: 0
- Personal protection: -

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Oral LD₅₀</th>
<th>Dermal LD₅₀</th>
<th>Inhalation LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol</td>
<td>108-46-3</td>
<td>&gt;98</td>
<td>= 202 mg/kg (Rat)</td>
<td>= 3360 mg/kg (Rabbit)</td>
<td>= 21.3 mg/L (Rat) 1 h</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**First Aid Measures**

**General advice**
If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

**Eye contact**
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact**
Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

**Inhalation**
Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

**Ingestion**
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider**
Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
None.
Specific hazards arising from the chemical
Specific hazards arising from the chemical: No information available.
Hazardous combustion products: Carbon oxides.

Explosion data
Sensitivity to Mechanical Impact: No information available.
Sensitivity to Static Discharge: No information available.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions: Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions
Environmental precautions: Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment: Prevent further leakage or spillage if safe to do so.
Methods for cleaning up: Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities
Incompatible materials: None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines: .
Other Information: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>
| Resorcinol 108-46-3 | STEL: 20 ppm  
TWA: 10 ppm | (vacated) TWA: 10 ppm  
(vacated) TWA: 45 mg/m³  
(vacated) STEL: 20 ppm  
(vacated) STEL: 90 mg/m³ | TWA: 10 ppm  
TWA: 45 mg/m³  
STEL: 20 ppm  
STEL: 90 mg/m³ |

**NIOSH IDLH** Immediately Dangerous to Life or Health

**Appropriate engineering controls**

**Engineering Controls**
- Showers
- Eyewash stations
- Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Tight sealing safety goggles. Face protection shield.

**Skin and Body Protection**
Wear protective gloves and protective clothing.

**Respiratory protection**
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**
When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Property**

- **Values**
- **Physical State**
  - Solid
- **Appearance**
  - No information available
- **Odor**
  - Aromatic
- **pH**
  - No information available
- **Melting point/freezing point**
  - 109 °C
- **Boiling point**
  - 178 °C
- **Flash point**
  - 127 °C CC (closed cup)
- **Density**
  - 1.27 g/cm³
- **Evaporation rate**
  - No information available
- **Upper flammability limits**
  - No information available
- **Lower flammability limit**
  - 1.4%
- **Vapor pressure**
  - 1
- **Vapor density**
  - 3.8
- **Specific gravity**
  - 1.27
- **Water solubility**
  - No information available
- **Solubility in other solvents**
  - No information available
- **Partition coefficient**
  - 0.8
- **Autoignition temperature**
  - 607.8 °C
- **Decomposition temperature**
  - No information available
- **Kinematic viscosity**
  - No information available
- **Explosive properties**
  - No information available
- **Oxidizing properties**
  - No information available

### 10. STABILITY AND REACTIVITY

**Reactivity**
- Not applicable

**Chemical stability**
- Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
- None under normal processing.

**Hazardous polymerization**
- No information available.

**Conditions to avoid**
- Extremes of temperature and direct sunlight.
Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
No data available.
Eye contact
No data available.
Skin Contact
No data available.
Ingestion
No data available.

Information on toxicological effects
Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Chronic Toxicity
Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.
Target Organ Effects
Blood, Central Vascular System (CVS), Central nervous system, Eyes, Respiratory system, Kidney, Liver, Skin, spleen.
Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

IARC (International Agency for Research on Cancer) Not classifiable as a human carcinogen

Numerical measures of toxicity - Product Information
Unknown acute toxicity
No information available.
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 500 mg/kg
ATEmix (dermal) 3360 mg/kg
ATEmix (inhalation-vapor) 21.3 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
May cause long lasting harmful effects to aquatic life

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol</td>
<td>-</td>
<td>100: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 flow-through 36 - 100: 96 h Pimephales promelas mg/L LC50 static 53.4: 96 h Pimephales promelas mg/L LC50</td>
<td>-</td>
<td>78: 48 h Daphnia magna mg/L LC50</td>
</tr>
</tbody>
</table>

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability
No information available.
Bioaccumulation
No information available.
Mobility
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol</td>
<td>0.79</td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

Other Information
Waste codes should be assigned by the user based on the application for which the product was used.

US EPA Waste Number
U201

14. TRANSPORT INFORMATION

DOT
UN/ID no
UN2876
Hazard Class
6.1
Packing Group
III
Proper shipping name
Resorcinol
Description
UN2876, Resorcinol, 6.1, III
Emergency Response Guide Number
153

IMDG
UN/ID no
UN2876
Hazard Class
6.1
Packing Group
III
Proper shipping name
Resorcinol
Description
UN2876, Resorcinol, 6.1, III
EmS-No
F-A, S-A

IATA
UN/ID no
UN2876
Hazard Class
6.1
Packing Group
III
Proper shipping name
Resorcinol
Description
UN2876, Resorcinol, 6.1, III

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists
TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC) ENCS (Japan): Philippines (PICCS)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

X - Listed
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations
Santa Cruz Biotechnology, Inc. www.scbt.com
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard Yes
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol 108-46-3</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resorcinol 108-46-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Revision note No information available

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet