1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- **Product Code**: 47111301
- **Trade Name**: SOLDRON SC PRIMARY
- **Manufacturer/Supplier**: Shipley Company
- **Address**: 455 Forest St. Marlborough, Massachusetts 01752
- **Phone Number**: (508) 481-7950
- **Emergency Phone Number**: (508) 481-7950
- **Chemtrec #**: (800) 424-9300
- **MSDS first issued**: 15 June 1999
- **Prepared By**: Environmental, Health & Safety Department
- **Local Sales Company**: Shipley Company, 455 Forest Street, Marlboro, MA 01752
- **Local Sales Phone Number**: (508-481-7950)

2. COMPOSITION/INFORMATION ON THE INGREDIENTS

Components without CAS numbers are Trade Secret

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS# / Codes</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>90.00 - 95.00</td>
</tr>
<tr>
<td>Polyglycol</td>
<td></td>
<td>1.00 - 5.00</td>
</tr>
<tr>
<td>Catechol</td>
<td>102-69-9</td>
<td>0.01 - 0.99</td>
</tr>
<tr>
<td>Methane sulfonic acid</td>
<td>75-75-2</td>
<td>0.01 - 0.99</td>
</tr>
</tbody>
</table>

3. HAZARD IDENTIFICATION

- **Main Hazards**: - Carcinogen - Irritant - Skin - Eye - Respiratory System - Blood - Liver - Kidney - Nervous System
- **Routes of Entry**: Inhalation, ingestion, eye and skin contact, absorption.
- **Carcinogenic Status**: Listed as carcinogenic by IARC.
- **Target Organs**: - Skin - Eye - Respiratory System - Blood - Liver - Kidney - Nervous System
- **Health Effects - Eyes**: Liquid or vapor may cause conjunctival irritation and transient corneal damage.
- **Health Effects - Skin**: Material may cause irritation. Liquid may be absorbed through the skin in toxicologically significant amounts if area of contact is large and exposure prolonged.
- **Health Effects - Ingestion**: Repeated and/or prolonged contact may lead to: dermatitis - discoloration - liver damage - kidney damage - headache - damage to the central nervous system - blood disorders
- **Health Effects - Inhalation**: A large dose may have the following effects:

4. FIRST AID MEASURES

- **First Aid - Eyes**: Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention immediately.
- **First Aid - Skin**: Immediately flush the skin with large quantities of water, preferably under a shower. Remove contaminated clothing while flushing skin. Obtain medical attention if blistering occurs or redness persists. If symptoms of poisoning develop, treat as for inhalation.
- **First Aid - Ingestion**: Wash out mouth with water. Obtain medical attention.
- **First Aid - Inhalation**: Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.
- **Advice to Physicians**: Treat symptomatically.

5. FIRE FIGHTING MEASURES

- **Extinguishing Media**: Use water spray, foam, dry chemical or carbon dioxide.
- **Special Fire-Fighting Procedures**: This product may give rise to hazardous vapors in a fire.
- **Unusual Fire & Explosion Hazards**: None.
- **Protective Equipment for Fire-Fighting**: Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- **Spill Procedures**: Transfer into suitable containers for recovery or disposal. Spills may be absorbed with appropriate absorbent material for acid solutions.
- **Personal Precautions**: Wear appropriate protective clothing.
- **Environmental Precautions**: Prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

7. HANDLING AND STORAGE

- **Handling**: Use in well ventilated area. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.
- **Storage**: Store in original containers. Storage area should be:
  - cool - dry - well ventilated - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Occupational Exposure Standards**
  - Catechol: ACGIH: TLV 5ppm (20mg/m3); OSHA: PEL 5ppm
  - Methane sulfonic acid: None assigned.
- **Engineering Control Measures**: Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.
Respiratory Protection
Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Hand Protection
Butyl rubber or neoprene gloves. Other chemical resistant gloves may be recommended by your safety professional.

Eye Protection
Chemical goggles.

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>VOC (g/l)</td>
<td>60.2</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.0 - 1.02</td>
</tr>
<tr>
<td>pH</td>
<td>&lt; 2.0</td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>Not Flammable</td>
</tr>
<tr>
<td>Explosion Limits (%)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Miscible.</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>Heavier than air.</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Slower than other</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Conditions to Avoid
- contact with incompatible materials - Exposure to direct sunlight

Incompatibilities
- Strong oxidizing agents - Reducing agents - Cyanides

Hazardous Polymerization
Will not occur.

Hazardous Decomposition Products
- carbon monoxide - Carbon Dioxide - oxides of sulfur

11. TOXICOLOGICAL INFORMATION

Acute Data
Methane Sulfonic Acid: Oral LD50 (rat) 2000mg/kg.

Catechol: Oral LD50 (mouse) 260mg/kg.

Chronic/Subchronic Data
Catechol: In laboratory animals, evidence of carcinogenic activity was observed. Studies have shown that this product readily penetrates skin and that skin contact can result in significant absorption and systemic toxicity.

Genotoxicity
No relevant studies identified.

Reproductive/Developmental Toxicity
No relevant studies identified.

Additional Data
None.

12. ECOLOGICAL INFORMATION

Mobility
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bio-accumulation
No relevant studies identified.

Ecotoxicity
The product may be harmful to aquatic organisms. Do not discharge directly to surface water.

Catechol: Tests on the following species gave a 48h TLm of 14mg/litre:
- goldfish

13. DISPOSAL CONSIDERATIONS

Product Disposal
Dispose of in accordance with all applicable local and national regulations.

Container Disposal
Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues.

Dispose of containers with care.

14. TRANSPORT INFORMATION

DOT Ground:
Not Regulated

UN Proper Shipping Name
None.

UN Class
None.

UN Number
None.

UN Packaging Group
None.

N.O.S. 1:
Not applicable.

N.O.S. 2:
Not applicable.

Subsidiary Risks
None.

ADR/RID Substance Identification Number
None assigned.

CERCLA RQ
Catechol (100#)

Marine Pollutant
None.

15. REGULATORY INFORMATION

TSCA Listed
All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50. This product is not subject to a Section 5(e) Consent Order or Significant New Use Rule (SNUR).

TSCA Exemptions
TSCA Sec.12(b) Export Notification
This product does not contain any substances subject to Section 12(b) export notification.

WHMIS Classification
D.2.A. D.2.B

MA Right To Know Law
All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at the de minimus concentration have been identified in the hazardous ingredients section of the MSDS.

California Proposition 65
This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA TITLE III-Section 311/312 Categorization (40 CFR 370)
Immediate, delayed health hazard
This product contains a chemical which is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: (quantity present is found elsewhere on this MSDS)

- Catechol (120-80-9)

### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Rating- FIRE</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Rating- HEALTH</td>
<td>2</td>
</tr>
<tr>
<td>NFPA Rating- REACTIVITY</td>
<td>0</td>
</tr>
<tr>
<td>NFPA Rating- SPECIAL</td>
<td>None.</td>
</tr>
</tbody>
</table>

**Abbreviations**

- N/A: Denotes no applicable information was found.
- CAS#: Chemical Abstract Services Number
- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- STEL: Short Term Exposure Limit
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- R: Risk
- S: Safety
- LD50: Lethal Dose 50%
- LC50: Lethal Concentration 50%
- BOD: Biological Oxygen Demand
- Koc: Soil Organic Carbon Partition Coefficient
- TLm: Median Tolerance Limit

**Disclaimer**

The data contained herein is based on information that Shipley Company believes to be reliable, but no expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product described and not to such products in combination with any other product and no agent of Shipley Company is authorized to vary any of such data. Shipley Company and its agents disclaim all liability for any action taken or foregone on reliance upon such data.