Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name: PeCOD® Calibrant
Chemical Name: Sorbitol Solution

Synonyms:
Advanced Blue Range Calibrant
Green Range Calibrant
Yellow Range Calibrant
Red Range Calibrant

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Product Use: For the calibration of the MANTECH PeCOD® Analyzer. Laboratory and industrial use only. No uses advised against.

1.3. Details of the supplier of the safety data sheet

Manufacturer Information:
579453 Ontario Inc.
o/a MANTECH
5473 Highway 6 North
Guelph, ON, N1H 6J2

1.4. Emergency telephone number

Monday – Friday 8:00AM to 4:30PM (EST): +1-519-763-4245
24-hour: +1-519-835-5252

2. Hazards Identification

2.1. Hazard classification according to Regulation (EC) No 1272/2008

Not classified.
2.2. **Label Elements**

*Symbol:* No symbol

*Signal Word:* No signal word

*Hazard Statements:* Not applicable

*Precautionary Statements:* Not applicable

2.3. **Other hazards**

*Skin:* Prolonged or repeated exposure may result in slight irritation.

*Ingestion:* Ingestion of large amounts may result in stomach irritation.

**HMIS Ratings:**

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Fire</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Hazard Scale:**

- 0 = Minimal
- 1 = Slight
- 2 = Moderate
- 3 = Serious
- 4 = Severe
- * = Chronic

3. **Composition Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbitol</td>
<td>50-70-4</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Silver Nitrate</td>
<td>7761-88-8</td>
<td>&lt;0.01%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Balance</td>
</tr>
</tbody>
</table>

4. **First Aid Measures**

4.1. **Description of first aid measures**

*Eye:* Wash with running water for at least 15 minutes. Seek medical attention if irritation develops.

*Skin:* Wash area with soap and water. Seek medical attention if irritation develops.

*Ingestion:* If uncomfortable, seek medical attention.

*Inhalation:* Remove patient to fresh air. Seek medical attention for any breathing difficulties.

*Advice to Doctor:* Treat symptomatically.

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

No further information available.
4.3. **Indication of any immediate attention and special treatment needed**

No further information available.

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5. **Fire-Fighting Measures**

5.1. **Extinguishing Media**

**General Fire Hazards:**
Non-combustible solution.

**Extinguishing Media:**
Not combustible, however, if material is involved in a fire use dry chemical, foam, carbon dioxide, water fog.

5.2. **Special hazards arising from the substance or mixture**

**Hazardous Combustion Properties:**
None identified.

5.3. **Advice for firefighters**

**Fire Fighting Equipment/Instructions:**
Firefighters should wear self-contained breathing apparatus and suitable protective clothing

<table>
<thead>
<tr>
<th>NFPA Ratings:</th>
<th>Health: 0</th>
<th>Fire: 0</th>
<th>Physical Hazard: 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Scale:</td>
<td>0 = Minimal</td>
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<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

6. **Accidental Release Measures**

6.1. **Personal precautions, protective equipment and emergency procedures**

**Evacuation Procedures:**
None necessary.

6.2. **Environmental Precautions**

**Special Procedures:**
Follow all local, State, Federal, and Provincial regulations for disposal. Wash area down with excess water.
6.3. Methods and material for containment and cleaning up

Containment Procedures:
Contain the discharged material.

Clean-Up Procedures:
Wear appropriate personal protective equipment. Absorb spill with inert material such as lime, polypads, or other suitable absorbent material.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protective equipment.

7. Handling and Storage

7.1. Precautions for safe handling

Handling Procedures:
Avoid eye contact and repeated or prolonged skin contact. Exercise good industrial and personal hygiene procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage Procedures:
Keep container tightly closed, and store at room temperature.

7.3. Specific end use

See Section 1.2. for specific end uses.

8. Exposure Controls / Personal Protection

8.1. Control parameters

EU community exposure limit: N/A

National exposure limit: N/A

8.2. Exposure Controls

Exposure Guidelines: Exposures should be minimized in accordance with good industrial hygiene practices
Engineering Controls:
Not Necessary. Natural ventilation should be adequate under normal conditions. Keep containers closed when not in use.

Personal Protective Equipment (PPE)
Eyes/Face: Wear safety glasses
Skin: Wear impervious (neoprene) gloves and cotton/polyester lab coat or overalls
Respiratory: Use in a ventilated area.
General: Wash hands after handling material and before eating or drinking.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, colourless</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>pH</td>
<td>4-6</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;100°C (220°F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>Not Available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Similar to Water</td>
</tr>
<tr>
<td>Lower Flammable Limit (LFL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit (UFL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Miscible with Water</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not Available</td>
</tr>
<tr>
<td>Auto Ignition Temperature</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>8.90 × 10⁻⁴ Pa. s</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

10.1. Reactivity
Not applicable.

10.2. Chemical stability
Chemical Stability: This is a stable material.

Conditions to Avoid: Avoid contact with extreme heat and incompatible materials.

10.3. Possibility of hazardous reactions
No dangerous reactions known.
10.4. **Incompatible materials**

Strong oxidizers.

10.5. **Hazardous decomposition products**

 Decomposition may yield Carbon Monoxide, Carbon Dioxide, and/or low molecular weight hydrocarbons when heated.

### 11. Toxicological Information

11.1. **Information on toxicological effects**

**Acute toxicity:** No LD50 or LC50 available for this product.

**Skin corrosion/irritation:** Does not cause skin irritation.

**Serious eye damage/irritation:** Does not cause eye damage/irritation.

**Respiratory or skin sensitization:** Over exposure may be irritating to contaminated tissues, but is reversible when removed from exposure.

**Germ cell mutagenicity:** No mutagenicity data available for this product.

**Carcinogenicity:** No carcinogenicity data available for this product.

**Reproductive toxicity:** No teratogenicity data available for this product. This product is not expected to cause reproductive or developmental effects.

**STOT-single exposure:** Not applicable.

**STOT-repeated exposure:** Not applicable.

**Aspiration hazard:** Not applicable.

### 12. Ecological Information

12.1. **Toxicity**

No data available.
12.2. Persistence and biodegradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal Considerations

13.1. Waste treatment method
Dispose of waste according to Local, State, Federal and Provincial Environmental Regulations.

14. Transport Information

14.1. UN-Number
None allocated.

14.2. UN proper shipping name
None allocated.

14.3. Transport hazard class(es)
DOT, IATA, IMDG: This product is not regulated as a hazardous material for transportation

14.4. Packing group
None allocated.
14.5. **Environmental hazards**

This substance is not associated with any environmental hazards.

14.6. **Special precautions for users**

No special precautions applicable.

14.7. **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

15. **Regulatory Information**

15.1. **Safety, health, and environmental regulations/legislation specific for the substance or mixture**

**US Federal regulations**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory.

**Canadian regulations**

Not listed on the Canadian DSL (Domestic Substances List) inventory.

**WHMIS Classification:** Not classified by WHMIS.

Not listed on the Canadian Ingredient Disclosure List

**EU Regulations**

i. Directive 2012/18/EU: Substance is not listed.

ii. Named dangerous substances – ANNEX I: Substance is not listed.

iii. LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV): Substance is not listed.


15.2. **Chemical safety assessment**

A chemical safety assessment had not been performed for this substance.

16. **Other Information**

Workers should be trained to handle hazardous chemicals. It is recommended that they are familiar with the contents of this safety data sheet (SDS). This SDS is not a risk assessment; recipients are advised to make their own risk assessment as required by other Health and Safety legislations. This substance is compliant with REACH.

**Created:** June 20, 2012
Revised: October 3, 2019

Reference: Not Available

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