



# Material Safety Data Sheet

Revision Date: 14 September 2009  
Print Date: 14 September 2009

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PCS Calibrator Solutions  
Product number: PCS-600  
Company: Artel, Inc.  
25 Bradley Drive  
Westbrook, Maine 04092-2013  
Telephone: 207-854-0860  
888-406-3463 (toll-free)  
Fax: 207-854-0867

## 2. HAZARDS IDENTIFICATION

No hazardous components as defined by OSHA 29 CFR 1910, Subpart Z.  
Health Hazards (Acute and Chronic): Eye or skin contact may prove irritating.  
Carcinogenicity: None reported NTP? No IARC Monographs? No  
Medical Conditions Generally Aggravated by Exposure: Not established. Unnecessary exposure should be avoided.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Proprietary, aqueous based solution containing the following:

<u>Ingredient</u>	<u>CAS No.</u>	<u>Concentration or Weight %</u>
Aqueous phthalate buffer	None	0.1M
Copper (II) chloride dihydrate	10125-13-0	≤ 0.15%
Methyl 4-hydroxybenzoate	99-76-3	0.1%
2-Phenoxyethanol	122-99-6	0.2%
EDTA	64-02-8	≤ 0.5%
Ponceau S (Acid Red 112)	6226-79-5	Variable 0% to 0.1%

## 4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Call a physician.  
Skin Contact: Immediately flush with water for at least 15 minutes. Wash with soap and water.  
Ingestion: If patient is conscious, induce vomiting and/or drink large quantities of water or milk. Call a physician.  
Inhalation: N/A

## 5. FIRE FIGHTING MEASURES

Flash Point: None  
Flammable Limits: N/A  
LEL: None  
UEL: None  
Extinguishing Media: Nonflammable  
Special Fire Fighting Procedures: N/A  
Unusual Fire and Explosion Hazards: None

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: No special practices required.  
Spill: Recover as much as possible and dispose of remainder in accordance with local, state or federal regulations.

## 7. HANDLING AND STORAGE

Storage Temperature: 18-28 °C  
Precautions to be taken in Handling and Storage: Prevent spillage or breakage.  
Other Precautions: No requirements other than good hygiene and safety practices employed with any laboratory reagents.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory Protection: Not required  
Ventilation: Local Exhaust: Normal Special: Not required  
Mechanical: Not required Other: Not required  
Protective Gloves: Impervious gloves useful but not required.  
Eye Protection: Safety glasses recommended.  
Other Protective Clothing or Equipment: Lab coat to protect clothing and minimize skin contact.  
Work/Hygiene Practices: No special practices required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, purple aqueous solutions; odorless  
Boiling Point: 100°C  
Vapor Pressure (mm Hg.): 17.6 mmHg  
Vapor Density (AIR = 1): 0.62  
Solubility in Water: Complete  
Specific Gravity (H<sub>2</sub>O = 1): 1.0  
Melting Point: 0°C  
Evaporation Rate (Butyl Acetate = 1): 1.8

## 10. STABILITY AND REACTIVITY

Stability: Stable Conditions to Avoid: N/A  
Incompatibility: None  
Hazardous Decomposition or Byproducts: None  
Hazardous Polymerization: Will Not Occur Conditions to Avoid: N/A

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity: No data available

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No relevant studies identified

## 13. DISPOSAL CONSIDERATIONS

Disposal considerations: Not an RCRA hazardous waste as supplied. Observe all federal, state, and local waste disposal laws. State and local regulations may differ from federal regulations. Always comply with local disposal regulations.

#### 14. TRANSPORT INFORMATION

DOT (US)  
UN-Number: Not classified

IMDG  
UN-Number: Not classified

IATA  
UN-Number: Not classified

No special precautions required.

#### 15. REGULATORY INFORMATION

##### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### SARA 313 Components

2-Phenoxyethanol (**See Note 1**)  
Copper (II) chloride dihydrate (**See Note 1**)

CAS No.  
122-99-6  
10125-13-0

**Note 1:** As used in this product, not subject to the reporting requirements of SARA Section 313.

Risk Phrases: Not applicable  
EC consideration: Not classified

#### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used as a guide only. No warranty is expressed or implied with respect to the information provided. Artel, Inc. shall not be held liable for any damage resulting from handling or contact with the above product.



## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PCS Sample Range Solutions

Product number: PCS-221 thru PCS-226

Company: Artel, Inc.  
25 Bradley Drive  
Westbrook, Maine 04092-2013

Telephone: 207-854-0860  
888-406-3463 (toll-free)

Fax: 207-854-0867

## 2. HAZARDS IDENTIFICATION

No hazardous components as defined by OSHA 29 CFR 1910, Subpart Z.

Health Hazards (Acute and Chronic): Eye or skin contact may prove irritating.

Carcinogenicity: None reported      NTP? No      IARC Monographs? No

Medical Conditions Generally Aggravated by Exposure: Not established. Unnecessary exposure should be avoided.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Proprietary, aqueous based solution containing the following:

<u>Ingredient</u>	<u>CAS No.</u>	<u>Concentration or Weight %</u>
Aqueous phthalate buffer	None	≤ 0.02M
Ponceau S (Acid Red 112)	6226-79-5	< 2%
Methyl 4-hydroxybenzoate	99-76-3	≤ 0.1%
2-Phenoxyethanol	122-99-6	≤ 0.2%
EDTA	64-02-8	≤ 0.1%

## 4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Call a physician.

Skin Contact: Immediately flush with water for at least 15 minutes. Wash with soap and water.

Ingestion: If patient is conscious, induce vomiting and/or drink large quantities of water or milk. Call a physician.

Inhalation: N/A

## 5. FIRE FIGHTING MEASURES

Flash Point: None

Flammable Limits: N/A

LEL: None

UEL: None

Extinguishing Media: Nonflammable

Special Fire Fighting Procedures: N/A

Unusual Fire and Explosion Hazards: None

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: No special practices required.  
Spill: Recover as much as possible and dispose of remainder in accordance with local, state or federal regulations.

## 7. HANDLING AND STORAGE

Storage Temperature: 18-28 °C  
Precautions to be taken in Handling and Storage: Prevent spillage or breakage.  
Other Precautions: No requirements other than good hygiene and safety practices employed with any laboratory reagents.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory Protection: Not required  
Ventilation: Local Exhaust: Normal Special: Not required  
Mechanical: Not required Other: Not required  
Protective Gloves: Impervious gloves useful but not required.  
Eye Protection: Safety glasses recommended.  
Other Protective Clothing or Equipment: Lab coat to protect clothing and minimize skin contact.  
Work/Hygiene Practices: No special practices required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, red aqueous solutions; odorless  
Boiling Point: 100°C  
Vapor Pressure (mm Hg.): 17.6 mmHg  
Vapor Density (AIR = 1): 0.62  
Solubility in Water: Complete  
Specific Gravity (H<sub>2</sub>O = 1): 1.0  
Melting Point: 0°C  
Evaporation Rate (Butyl Acetate = 1): 1.8

## 10. STABILITY AND REACTIVITY

Stability: Stable Conditions to Avoid: N/A  
Incompatibility: None  
Hazardous Decomposition or Byproducts: None  
Hazardous Polymerization: Will Not Occur Conditions to Avoid: N/A

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity: No data available

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No relevant studies identified

## 13. DISPOSAL CONSIDERATIONS

Disposal considerations: Not an RCRA hazardous waste as supplied. Observe all federal, state, and local waste disposal laws. State and local regulations may differ from federal regulations. Always comply with local disposal regulations.

#### 14. TRANSPORT INFORMATION

DOT (US)  
UN-Number: Not classified

IMDG  
UN-Number: Not classified

IATA  
UN-Number: Not classified

No special precautions required.

#### 15. REGULATORY INFORMATION

##### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### SARA 313 Components

2-Phenoxyethanol (See Note 1)

CAS No.  
122-99-6

**Note 1:** As used in this product, not subject to the reporting requirements of SARA Section 313.

Risk Phrases: Not applicable  
EC consideration: Not classified

#### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used as a guide only. No warranty is expressed or implied with respect to the information provided. Artel, Inc. shall not be held liable for any damage resulting from handling or contact with the above product.



# Material Safety Data Sheet

Revision Date: 28 September 2009

Print Date: 28 September 2009

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PCS Blank Solution

Component of: PCS-200, PCS-210, PCS-211, PCS-212, and PCS-231 thru PCS-236

Company: Artel, Inc.  
25 Bradley Drive  
Westbrook, Maine 04092-2013

Telephone: 207-854-0860  
888-406-3463 (toll-free)

Fax: 207-854-0867

## 2. HAZARDS IDENTIFICATION

No hazardous components as defined by OSHA 29 CFR 1910, Subpart Z.

Health Hazards (Acute and Chronic): Eye or skin contact may prove irritating.

Carcinogenicity: None reported NTP? No IARC Monographs? No

Medical Conditions Generally Aggravated by Exposure: Not established. Unnecessary exposure should be avoided.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Proprietary, aqueous based solution containing the following:

<u>Ingredient</u>	<u>CAS No.</u>	<u>Concentration or Weight %</u>
Aqueous phthalate buffer	None	0.02M
Poly(ethylene glycol)	25322-68-3	12%
Copper (II) chloride dihydrate	10125-13-0	0.1%
Methyl 4-hydroxybenzoate	99-76-3	0.1%
2-Phenoxyethanol	122-99-6	0.2%
EDTA	64-02-8	0.4%

## 4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Call a physician.

Skin Contact: Immediately flush with water for at least 15 minutes. Wash with soap and water.

Ingestion: If patient is conscious, induce vomiting and/or drink large quantities of water or milk. Call a physician.

Inhalation: N/A

## 5. FIRE FIGHTING MEASURES

Flash Point: None

Flammable Limits: N/A

LEL: None

UEL: None

Extinguishing Media: Nonflammable

Special Fire Fighting Procedures: N/A

Unusual Fire and Explosion Hazards: None

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: No special practices required.  
Spill: Recover as much as possible and dispose of remainder in accordance with local, state or federal regulations.

## 7. HANDLING AND STORAGE

Storage Temperature: 18-28 °C  
Precautions to be taken in Handling and Storage: Prevent spillage or breakage.  
Other Precautions: No requirements other than good hygiene and safety practices employed with any laboratory reagents.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory Protection: Not required  
Ventilation: Local Exhaust: Normal Special: Not required  
Mechanical: Not required Other: Not required  
Protective Gloves: Impervious gloves useful but not required.  
Eye Protection: Safety glasses recommended.  
Other Protective Clothing or Equipment: Lab coat to protect clothing and minimize skin contact.  
Work/Hygiene Practices: No special practices required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, blue aqueous solution; odorless  
Boiling Point: 100°C  
Vapor Pressure (mm Hg.): 17.6 mmHg  
Vapor Density (AIR = 1): 0.62  
Solubility in Water: Complete  
Specific Gravity (H<sub>2</sub>O = 1): 1.0  
Melting Point: 0°C  
Evaporation Rate (Butyl Acetate = 1): 1.8

## 10. STABILITY AND REACTIVITY

Stability: Stable Conditions to Avoid: N/A  
Incompatibility: None  
Hazardous Decomposition or Byproducts: None  
Hazardous Polymerization: Will Not Occur Conditions to Avoid: N/A

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Acute Toxicity: No data available

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No relevant studies identified

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Disposal considerations: Not an RCRA hazardous waste as supplied. Observe all federal, state, and local waste disposal laws. State and local regulations may differ from federal regulations. Always comply with local disposal regulations.

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DOT (US)  
UN-Number: Not classified

IMDG  
UN-Number: Not classified

IATA  
UN-Number: Not classified

No special precautions required.

#### 15. REGULATORY INFORMATION

##### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### SARA 313 Components

2-Phenoxyethanol (**See Note 1**)  
Copper (II) chloride dihydrate (**See Note 1**)

CAS No.  
122-99-6  
10125-13-0

**Note 1:** As used in this product, not subject to the reporting requirements of SARA Section 313.

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EC consideration: Not classified

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