PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

10-Feb-2011

Company: US EPA SESD
           Greater Faith
Room/Area ID: YB6C 02
Reference #: Reference #:

Sales Order #: C002863
CCC Panel #: P72439
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

CCC Panel # P72439
ISA Class G3
Harsh

DO NOT TOUCH METAL COUPON

Copper Corrosion
1607 A/30 Days

Silver Corrosion
2588 A/30 Days
(see next page for complete analysis)

Summary for PURAFIL CCC # P72439

The electrolytic reduction analysis on Corrosion Classification Coupon #P72439 shows the presence of high concentrations of contaminants in the environment tested. The hydrogen sulfide level is expected to range between 10 and 50 ppb and the sulfur dioxide level between 100 and 300 ppb. There is a high probability that equipment reliability will be adversely affected by corrosive attack.

Your local representative for additional information and assistance is:
Purafil, Inc./Chris Moon
2654 Weaver Way, Doraville GA 30340, USA
Chris_Moon@Purafil.com 770-662-8545

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com

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## Corrosion Film Composition

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
<th>1 Year</th>
<th>5 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Films</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Cu₂O</td>
<td>716 Å</td>
<td>2499 Å</td>
<td>5587 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>891 Å</td>
<td>3108 Å</td>
<td>6950 Å</td>
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<tr>
<td>Totals</td>
<td>1607 Å</td>
<td>5607 Å</td>
<td>12537 Å</td>
</tr>
<tr>
<td>Silver Films</td>
<td></td>
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<td>AgCl</td>
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<tr>
<td>Ag₂S</td>
<td>2105 Å</td>
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<tr>
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<tr>
<td>Totals</td>
<td>2588 Å</td>
<td>31504 Å</td>
<td>157520 Å</td>
</tr>
</tbody>
</table>

Gold Coupon - Magnified 20x

### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

- **ISA Class GX: SEVERE**
  
  Electronic/electrical equipment not expected to survive due to corrosive attack.
  
  \[\text{Cu} \geq 2000\]

- **ISA Class G3: HARSH**
  
  High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
  
  \[1000 \leq \text{Cu} < 2000\]

- **ISA Class G2: MODERATE**
  
  Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
  
  \[300 \leq \text{Cu} < 1000\]

- **ISA Class G1: MILD**
  
  Corrosion is not a factor in determining equipment reliability.
  
  \[\text{Cu} < 300\]

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PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

10-Feb-2011

Company: US EPA SESD
Yellow Bluff Health Ctr / Powell Residence

Room/Area ID: YB7C092
Reference #: 

Sales Order #: C002863
CCC Panel #: P72429
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

CCC Panel # P72429
ISA Class G2
Moderate

Copper Corrosion
306 A/30 Days

Silver Corrosion
842 A/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72429

The electrolytic reduction analysis on Corrosion Classification Coupon #P72429 shows the presence of moderate concentrations of contaminants in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb and the sulfur dioxide level between 10 and 100 ppb. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

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Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com
### Corrosion Film Composition

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
<th>1 Year</th>
<th>5 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Films</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
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<td>Cu₂O</td>
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<td>254 Å</td>
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<tr>
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<td>Totals</td>
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<td>332 Å</td>
<td>435 Å</td>
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<tr>
<td>Silver Films</td>
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<tr>
<td>AgCl</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Ag₂S</td>
<td>842 Å</td>
<td>10249 Å</td>
<td>51245 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>0 Å</td>
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</tr>
<tr>
<td>Totals</td>
<td>842 Å</td>
<td>10249 Å</td>
<td>51245 Å</td>
</tr>
</tbody>
</table>

**Gold Pore Corrosion:**

Note: 1000 Å = 0.1 micron

### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

**ISA Class GX: SEVERE**
Electronic/electrical equipment not expected to survive due to corrosive attack.
(Cu >= 2000)

**ISA Class G3: HARSH**
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
(1000 <= Cu < 2000)

**ISA Class G2: MODERATE**
Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
(300 <= Cu < 1000)

**ISA Class G1: MILD**
Corrosion is not a factor in determining equipment reliability.
(Cu < 300)
PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

Company: US EPA SESD
Yellow Bluff Health Ctr / Powell Residence

Room/Area ID: YB7C02
Reference #: 

Sales Order #: C002863
CCC Panel #: P72428
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

Copper Corrosion
364 Å/30 Days

Silver Corrosion
1193 Å/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72428

The electrolytic reduction analysis on Corrosion Classification Coupon #P72428 shows the presence of moderate concentrations of contaminants in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb and the sulfur dioxide level between 10 and 100 ppb. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

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Chris_Moon@Purafil.com 770-662-8545

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com
### PURAFIL CCC # P72428 Analysis Results

#### Corrosion Film Composition

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Cu₂O</td>
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<td>191 Å</td>
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<td><strong>Totals</strong></td>
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</tr>
<tr>
<td><strong>Silver Films</strong></td>
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<td>Ag₂S</td>
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</tr>
<tr>
<td><strong>Totals</strong></td>
<td>1193 Å</td>
<td>14519 Å</td>
<td>72597 Å</td>
</tr>
</tbody>
</table>

**Gold Pore Corrosion:**

Note: 1000 Å = 0.1 micron

#### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

**ISA Class GX: SEVERE**

Electronic/electrical equipment not expected to survive due to corrosive attack.

(Cu \(>\) 2000)

**ISA Class G3: HARSH**

High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.

(1000 \(\leq\) Cu < 2000)

**ISA Class G2: MODERATE**

Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.

(300 \(\leq\) Cu < 1000)

**ISA Class G1: MILD**

Corrosion is not a factor in determining equipment reliability.

(Cu \(<\) 300)
PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

Company: US EPA SESD
Yellow Bluff Town Hall

Room/Area ID: YBAC02
Reference #: 

Sales Order #: C002863
CCC Panel #: P72434
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

CCC Panel # P72434
ISA Class G2
Moderate

Copper Corrosion
388 Å/30 Days

Silver Corrosion
1228 Å/30 Days
(see next page for complete analysis)

Summary for PURAFIL CCC # P72434

The electrolytic reduction analysis on Corrosion Classification Coupon #P72434 shows the presence of moderate concentrations of contaminants in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb and the sulfur dioxide level between 10 and 100 ppb. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

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Chris_Moon@Purafil.com 770-662-8545

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com
### PURAFIL CCC # P72434 Analysis Results

#### Corrosion Film Composition Projections

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
<th>1 Year</th>
<th>5 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Films</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Cu₂O</td>
<td>218 Å</td>
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<td>170 Å</td>
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<td>Totals</td>
<td>388 Å</td>
<td>420 Å</td>
<td>549 Å</td>
</tr>
<tr>
<td>Silver Films</td>
<td></td>
<td></td>
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<tr>
<td>AgCl</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Ag₂S</td>
<td>1228 Å</td>
<td>14946 Å</td>
<td>74732 Å</td>
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<tr>
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<tr>
<td>Totals</td>
<td>1228 Å</td>
<td>14946 Å</td>
<td>74732 Å</td>
</tr>
</tbody>
</table>

#### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

**ISA Class GX: SEVERE**
Electrical/electrical equipment not expected to survive due to corrosive attack.

(Cu >= 2000)

**ISA Class G3: HARSH**
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.

(1000 <= Cu < 2000)

**ISA Class G2: MODERATE**
Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.

(300 <= Cu < 1000)

**ISA Class G1: MILD**
Corrosion is not a factor in determining equipment reliability.

(Cu < 300)
10-Feb-2011

Company: US EPA SESD
Mt. Pleasant Miss Church

Room/Area ID: YB4C02
Reference #: 

Summary for PURAFIL CCC # P72426

The electrolytic reduction analysis on Corrosion Classification Coupon #P72426 shows the presence of only very low concentrations of contaminants in the environment tested. The hydrogen sulfide level is not expected to exceed 3 ppb and the sulfur dioxide level should be less than 10 ppb. During the test period, corrosion, as shown by the copper coupon, is not a factor in determining equipment reliability.

Please note: Copper's reactivity is sensitive to temperature and relative humidity and can therefore exhibit seasonal variation. For example, below 30% relative humidity (typical for heated indoor air in winter), copper readings will be dramatically reduced. However, silver's reactivity is not affected by temperature and relative humidity. Due to the elevated level of film growth on the silver coupon, corrosion may be a factor in determining equipment reliability; continued monitoring is recommended.

Your local representative for additional information and assistance is:

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Chris_Moon@Purafil.com 770-662-8545

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com
## Corrosion Film Composition

<table>
<thead>
<tr>
<th>Corrosion Film Composition</th>
<th>30 Days</th>
<th>1 Year</th>
<th>5 Year</th>
<th>Gold Coupon - Magnified 20x</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu$_2$S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
<td></td>
</tr>
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<td>Cu$_2$O</td>
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<tr>
<td>Totals</td>
<td>147 Å</td>
<td>160 Å</td>
<td>209 Å</td>
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<tr>
<td><strong>Silver Films</strong></td>
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<td></td>
</tr>
<tr>
<td>AgCl</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
<td></td>
</tr>
<tr>
<td>Ag$_2$S</td>
<td>631 Å</td>
<td>7687 Å</td>
<td>38434 Å</td>
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<td>0 Å</td>
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<tr>
<td>Totals</td>
<td>631 Å</td>
<td>7687 Å</td>
<td>38434 Å</td>
<td></td>
</tr>
</tbody>
</table>

**Gold Pore Corrosion:**

Note: 1000 Å = 0.1 micron

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## Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

### ISA Class GX: SEVERE
Electronic/electrical equipment not expected to survive due to corrosive attack.
(Cu $\geq 2000$)

### ISA Class G3: HARSH
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
(1000 $\leq$ Cu $< 2000$)

### ISA Class G2: MODERATE
Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
(300 $\leq$ Cu $< 1000$)

### ISA Class G1: MILD
Corrosion is not a factor in determining equipment reliability.
(Cu $< 300$)

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Summary for PURAFIL CCC # P72430

The electrolytic reduction analysis on Corrosion Classification Coupon #P72430 shows the presence of moderate concentrations of contaminants in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb and the sulfur dioxide level between 10 and 100 ppb. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

Your local representative for additional information and assistance is:
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Chris_Moon@Purafil.com 770-662-8545

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922
Email: purafil@purafil.com / Internet: http://www.purafil.com
## PURAFIL CCC # P72430 Analysis Results

<table>
<thead>
<tr>
<th>Corrosion Film Composition</th>
<th>Projections</th>
<th>Gold Coupon - Magnified 20x</th>
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</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
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<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>375 Å</td>
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<tr>
<td>Cu₂O</td>
<td>170 Å</td>
<td>280 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>297 Å</td>
<td>488 Å</td>
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<tr>
<td>Totals</td>
<td>842 Å</td>
<td>1384 Å</td>
</tr>
<tr>
<td><strong>Silver Films</strong></td>
<td></td>
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<tr>
<td>AgCl</td>
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</tr>
<tr>
<td>Totals</td>
<td>719 Å</td>
<td></td>
</tr>
</tbody>
</table>

### Gold Pore Corrosion:

- Note: 1000 Å = 0.1 micron

---

### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

- **ISA Class GX: SEVERE**
  - Electronic/electrical equipment not expected to survive due to corrosive attack.
  - (Cu > 2000)

- **ISA Class G3: HARSH**
  - High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
  - (1000 <= Cu < 2000)

- **ISA Class G2: MODERATE**
  - Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
  - (300 <= Cu < 1000)

- **ISA Class G1: MILD**
  - Corrosion is not a factor in determining equipment reliability.
  - (Cu < 300)
The electrolytic reduction analysis on Corrosion Classification Coupon #P72441 shows the presence of only very low concentrations of contaminants in the environment tested. The hydrogen sulfide level is not expected to exceed 3 ppb and the sulfur dioxide level should be less than 10 ppb. During the test period, corrosion, as shown by the copper coupon, is not a factor in determining equipment reliability.

Please note: Copper's reactivity is sensitive to temperature and relative humidity and can therefore exhibit seasonal variation. For example, below 30% relative humidity (typical for heated indoor air in winter), copper readings will be dramatically reduced. However, silver's reactivity is not affected by temperature and relative humidity. Due to the elevated level of film growth on the silver coupon, corrosion may be a factor in determining equipment reliability; continued monitoring is recommended.

Your local representative for additional information and assistance is:

Purafil, Inc./Chris Moon
2654 Weaver Way, Doraville GA 30340, USA
Chris_Moon@Purafil.com 770-662-8545
### PURAFIL CCC # P72441 Analysis Results

<table>
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<tr>
<th>Corrosion Film Composition</th>
<th>30 Days</th>
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<th>5 Year</th>
<th>Gold Coupon - Magnified 20x</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
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<td></td>
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<tr>
<td>Cu₂S</td>
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<tr>
<td>Totals</td>
<td>491 Å</td>
<td>5979 Å</td>
<td>29893 Å</td>
<td></td>
</tr>
</tbody>
</table>

**Gold Pore Corrosion:**

Note: 1000 Å = 0.1 micron

---

### Equipment Reliability Correlation

(ISA Standard S71.04-1985 for Copper)

**ISA Class GX: SEVERE**

Electronic/electrical equipment not expected to survive due to corrosive attack.

\( \text{Cu} \geq 2000 \)

**ISA Class G3: HARSH**

High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.

\( 1000 < \text{Cu} < 2000 \)

**ISA Class G2: MODERATE**

Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.

\( 300 \leq \text{Cu} < 1000 \)

**ISA Class G1: MILD**

Corrosion is not a factor in determining equipment reliability.

\( \text{Cu} < 300 \)

---

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PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

10-Feb-2011

Company: US EPA SESD
Roland Copper State Park

Room/Area ID: YBBC02
Reference #: 

Sales Order #: C002863
CCC Panel #: P72433
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

CCC Panel # P72433

ISA Class G1
Mild

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Copper Corrosion
230 A/30 Days

Silver Corrosion
631 A/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72433

The electrolytic reduction analysis on Corrosion Classification Coupon #P72433 shows the presence of only very low concentrations of contaminants in the environment tested. The hydrogen sulfide level is not expected to exceed 3 ppb and the sulfur dioxide level should be less than 10 ppb. During the test period, corrosion, as shown by the copper coupon, is not a factor in determining equipment reliability.

Please note: Copper's reactivity is sensitive to temperature and relative humidity and can therefore exhibit seasonal variation. For example, below 30% relative humidity (typical for heated indoor air in winter), copper readings will be dramatically reduced. However, silver's reactivity is not affected by temperature and relative humidity. Due to the elevated level of film growth on the silver coupon, corrosion may be a factor in determining equipment reliability; continued monitoring is recommended.

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Chris_Moon@Purafil.com 770-662-8545

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http://notes.purafil.com/me4n/ccc.nsf/rUID12/u77D8003F6C36  7/20/2011
PURAFIL CCC # P72433 Analysis Results

<table>
<thead>
<tr>
<th>Corrosion Film Composition</th>
<th>Projections</th>
<th>Gold Coupon - Magnified 20x</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu₂S</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Cu₂O</td>
<td>230 Å</td>
<td>250 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Totals</td>
<td>230 Å</td>
<td>250 Å</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Silver Films</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AgCl</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Ag₂S</td>
<td>631 Å</td>
<td>7687 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Totals</td>
<td>631 Å</td>
<td>7687 Å</td>
</tr>
</tbody>
</table>

**Gold Pore Corrosion:**

Note: 1000 Å = 0.1 micron

Equipment Reliability Correlation
(ISA Standard S71.04-1985 for Copper)

ISA Class GX: SEVERE
Electronic/electrical equipment not expected to survive due to corrosive attack.
(Cu > 2000)

ISA Class G3: HARSH
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
(1000 ≤ Cu < 2000)

ISA Class G2: MODERATE
Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
(300 ≤ Cu < 1000)

ISA Class G1: MILD
Corrosion is not a factor in determining equipment reliability.
(Cu < 300)
The electrolytic reduction analysis on Corrosion Classification Coupon #P72437 shows the presence of only very low concentrations of contaminants in the environment tested. The hydrogen sulfide level is not expected to exceed 3 ppb and the sulfur dioxide level should be less than 10 ppb. During the test period, corrosion, as shown by the copper coupon, is not a factor in determining equipment reliability.

Please note: Copper's reactivity is sensitive to temperature and relative humidity and can therefore exhibit seasonal variation. For example, below 30% relative humidity (typical for heated indoor air in winter), copper readings will be dramatically reduced. However, silver's reactivity is not affected by temperature and relative humidity. Due to the elevated level of film growth on the silver coupon, corrosion may be a factor in determining equipment reliability; continued monitoring is recommended.

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### Corrosion Film Composition

<table>
<thead>
<tr>
<th></th>
<th>30 Days</th>
<th>1 Year</th>
<th>5 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper Films</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu2S</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Cu2O</td>
<td>77 Å</td>
<td>83 Å</td>
<td>109 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>223 Å</td>
<td>242 Å</td>
<td>316 Å</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>300 Å</td>
<td>325 Å</td>
<td>425 Å</td>
</tr>
<tr>
<td><strong>Silver Films</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AgCl</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Ag2S</td>
<td>421 Å</td>
<td>5124 Å</td>
<td>25622 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>0 Å</td>
<td>0 Å</td>
<td>0 Å</td>
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**Gold Pore Corrosion:**
Note: 1000 Å = 0.1 micron

### Equipment Reliability Correlation
(ISA Standard S71.04-1985 for Copper)

- **ISA Class GX: SEVERE**
  - Electrical/electrical equipment not expected to survive due to corrosive attack.
  - (Cu >= 2000)

- **ISA Class G3: HARSH**
  - High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years.
  - (1000 <= Cu < 2000)

- **ISA Class G2: MODERATE**
  - Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years.
  - (300 <= Cu < 1000)

- **ISA Class G1: MILD**
  - Corrosion is not a factor in determining equipment reliability.
  - (Cu < 300)
PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

Company: US EPA SESD
William Social Center

Room/Area ID: YB2C02D

Reference #: 

Sales Order #: C002863
CCC Panel #: P72431
Date In: 24-Jan-2011
Date Out: 28-Jan-2011
Days In Service: 4

CCC Panel # P72431
ISA Class G1
Mild

DO NOT TOUCH METAL COUPON

Summary for PURAFIL CCC # P72431

The electrolytic reduction analysis on Corrosion Classification Coupon #P72431 shows the presence of only very low concentrations of contaminants in the environment tested. The hydrogen sulfide level is not expected to exceed 3 ppb and the sulfur dioxide level should be less than 10 ppb. During the test period, corrosion, as shown by the copper coupon, is not a factor in determining equipment reliability.

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<td>230 Å</td>
<td>250 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>69 Å</td>
<td>75 Å</td>
</tr>
<tr>
<td>Totals</td>
<td>299 Å</td>
<td>325 Å</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
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<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
<td>Ag₂S</td>
<td>659 Å</td>
<td>8028 Å</td>
</tr>
<tr>
<td>Unknowns</td>
<td>0 Å</td>
<td>0 Å</td>
</tr>
<tr>
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**Gold Pore Corrosion:**

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### Equipment Reliability Correlation

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