

# PURAFIL ENVIRONMENTAL CORROSION REPORT

12-Nov-2010

**Company:** 118532

**Sales Order #:** C002726  
**CCC Panel #:** P68774  
**Date In:** 04-Oct-2010  
**Date Out:** 19-Oct-2010  
**Days In Service:** 15

**Room/Area ID:**  
**Reference #:**



**CCC Panel # P68774**

**ISA Class G2**  
Moderate

**Copper Corrosion**  
580 Å/30 Days

**Silver Corrosion**  
2282 Å/30 Days

(see next page for complete analysis)

### Summary for PURAFIL CCC # P68774

The electrolytic reduction analysis on Corrosion Classification Coupon #P68774 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:  
 Environmental Health and Eng  
 117 Fourth Avenue, Needham MA 02494, USA  
 tminegishi@eheinc.com

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**PURAFIL CCC # P68774 Analysis Results**

| <b>Corrosion Film Composition</b> |                |               |               | <b>Gold Coupon - Magnified 20x</b> |
|-----------------------------------|----------------|---------------|---------------|------------------------------------|
|                                   | Projections    |               |               |                                    |
|                                   | <u>30 Days</u> | <u>1 Year</u> | <u>5 Year</u> |                                    |
| <b>Copper Films</b>               |                |               |               |                                    |
| Cu <sub>2</sub> S                 | 441 Å          | 1538 Å        | 3438 Å        |                                    |
| Cu <sub>2</sub> O                 | 139 Å          | 484 Å         | 1082 Å        |                                    |
| Unknowns                          | 0 Å            | 0 Å           | 0 Å           |                                    |
| Totals                            | 580 Å          | 2022 Å        | 4520 Å        |                                    |
| <b>Silver Films</b>               |                |               |               |                                    |
| AgCl                              | 0 Å            | 0 Å           | 0 Å           |                                    |
| Ag <sub>2</sub> S                 | 2282 Å         | 27786 Å       | 138931 Å      |                                    |
| Unknowns                          | 0 Å            | 0 Å           | 0 Å           |                                    |
| Totals                            | 2282 Å         | 27786 Å       | 138931 Å      |                                    |
| <b>Gold Pore Corrosion:</b>       |                |               |               |                                    |
| Note: 1000 Å = 0.1 micron         |                |               |               |                                    |

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

