

PURAFIL ENVIRONMENTAL CORROSION REPORT

11-Jun-2010

Company: 111039

Sales Order #: C002697

CCC Panel #: P67944

Date In: 21-May-2010

Date Out: 03-Jun-2010

Days In Service: 13

Room Area ID:

Reference #:

CCC Panel # P67944**ISA Class G2**

Moderate

Copper Corrosion

374 Å/30 Days

Silver Corrosion

140 Å/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P67944

The electrolytic reduction analysis on Corrosion Classification Coupon #P67944 shows the presence of moderate concentrations of contaminants and high/variable humidity in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb, sulfur dioxide between 10 and 100 ppb, and chlorine between 1 and 2 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. 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

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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PURAFIL CCC # P67944 Analysis Results

| Corrosion Film Composition | | | | Gold Coupon - Magnified 20x |
|-----------------------------------|----------------|---------------|---------------|------------------------------------|
| | Projections | | | |
| | <u>30 Days</u> | <u>1 Year</u> | <u>5 Year</u> | |
| Copper Films | | | | |
| Cu ₂ S | 0 Å | 0 Å | 0 Å | |
| Cu ₂ O | 274 Å | 361 Å | 472 Å | |
| Unknowns | 100 Å | 132 Å | 173 Å | |
| Totals | 374 Å | 493 Å | 645 Å | |
| Silver Films | | | | |
| AgCl | 17 Å | 204 Å | 1019 Å | |
| Ag ₂ S | 123 Å | 1498 Å | 7490 Å | |
| Unknowns | 0 Å | 0 Å | 0 Å | |
| Totals | 140 Å | 1702 Å | 8509 Å | |

Gold Pore Corrosion:
Note: 1000 Å = 0.1 micron

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

