PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

19-Jan-2011

Company: 120305

Room/Area ID:
Reference #:

Sales Order #: C002726
CCC Panel #: P68738
Date In: 30-Nov-2010
Date Out: 14-Dec-2010
Days In Service: 14

CCC Panel # P68738

ISA Class G1
Mild

Copper Corrosion
272 Å/30 Days

Silver Corrosion
310 Å/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P68738

The electrolytic reduction analysis on Corrosion Classification Coupon #P68738 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:
Environmental Health and Eng
117 Fourth Avenue, Needham MA 02494, USA
tminegishi@eheinc.com

PURAFIL CCC # P68738 Analysis Results

Corrosion Film Composition

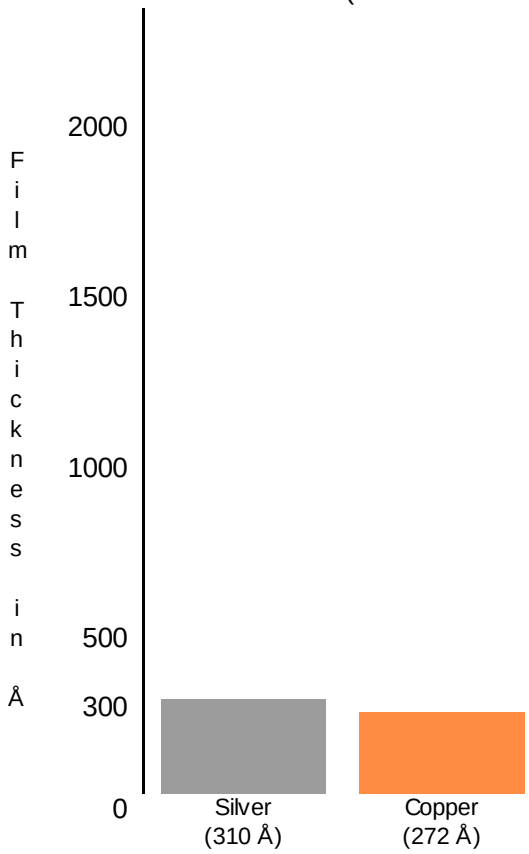
	Projections		
	30 Days	1 Year	5 Year
Copper Films			
Cu_2S	157 Å	209 Å	274 Å
Cu_2O	84 Å	113 Å	147 Å
Unknowns	31 Å	42 Å	55 Å
Totals	272 Å	364 Å	476 Å
Silver Films			
AgCl	0 Å	0 Å	0 Å
Ag_2S	241 Å	2928 Å	14641 Å
Unknowns	69 Å	840 Å	4201 Å
Totals	310 Å	3768 Å	18842 Å

Gold Pore Corrosion:
Note: 1000 Å = 0.1 micron

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.
(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)

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