

PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

18-Jan-2011

Company: US-EPA
Greater Faith

Sales Order #: C002863

Room Area ID: YB6C01

CCC Panel #: P72442

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US-EPA
Address	Greater Faith
Room/Area ID	YB6C01
Date In	11/16/10
Date Out	12/16/10
Coupon #	P72442
Tracking #	2363

Serial #

Industrial ERM Preservation CE

PURAFIL
2654 Weaver Way, Doraville, Georgia 30340 USA
Phone: (770) 662-8545 / Fax: (770) 263-6922
Internet: <http://www.purafil.com>

CCC # P72442

ISA Class GX
SEVERE

Copper Corrosion
4687 Å/30 days

Silver Corrosion
2708 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72442

The electrolytic reduction analysis on Corrosion Classification Coupon # P72442 shows the presence of extremely high concentrations of contaminants and the possibility of high/variable humidity in the environment tested. The hydrogen sulfide level is expected to be in excess of 50 ppb, sulfur dioxide greater than 300 ppb, and chlorine greater than 10 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. Electronic/electrical equipment is not expected to survive in this environment due to corrosive attack.

Your local representative for additional information and assistance is:

Contact Purafil, Inc./Chris Moon
2654 Weaver Way, Doraville GA 30340, USA
770-662-8545 Chris_Moon@Purafil.com

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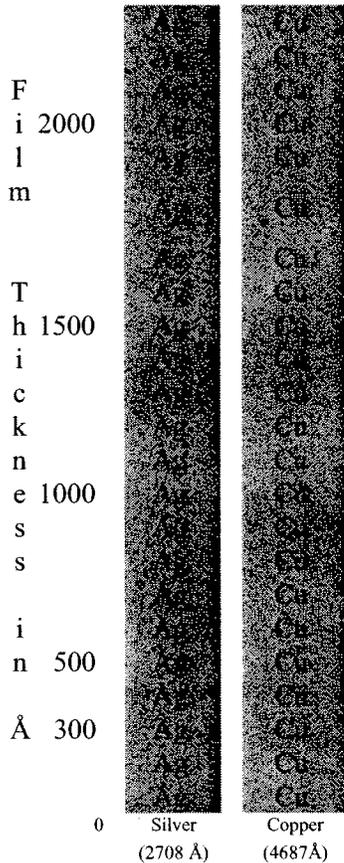
PURAFIL CCC # P72442 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition	Projections		
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	101 Å	536 Å	1568 Å
Unknowns	4586 Å	24270 Å	70967 Å
Totals	4687 Å	24806 Å	72535 Å
Silver Films			
AgCl	36 Å	442 Å	2208 Å
Ag ₂ S	2656 Å	32341 Å	161706 Å
Unknowns	16 Å	196 Å	980 Å
Totals	2708 Å	32979 Å	164894 Å

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

18-Jan-2011

Company: US-EPA
Yellow Bluff Health Ctr /
Powell Resident

Sales Order #: C002863

Room Area ID: YB7C01

CCC Panel #: P72440

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US-EPA
Address	Yellow Bluff Health Ctr / Powell
Room Area ID	YB7C01
Date In	11/16/10
Date Out	12/16/10
Coupon #	P72440
Tracking #	02863

Serial #

Industrial CRM Non-corrosion (U)

PURAFIL
First Invention

CCC # P72440

ISA Class GX
SEVERE

Copper Corrosion
3391 Å/30 days

Silver Corrosion
2081 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72440

The electrolytic reduction analysis on Corrosion Classification Coupon # P72440 shows the presence of extremely high concentrations of contaminants and the possibility of high/variable humidity in the environment tested. The hydrogen sulfide level is expected to be in excess of 50 ppb, sulfur dioxide greater than 300 ppb, and chlorine greater than 10 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. Electronic/electrical equipment is not expected to survive in this environment due to corrosive attack.

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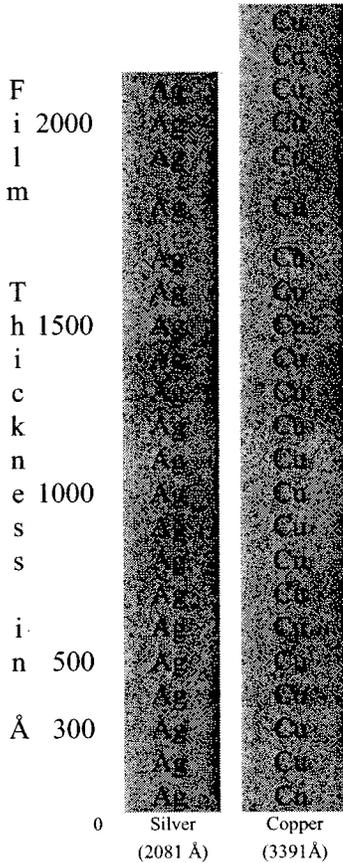
PURAFIL CCC # P72440 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition			
	30 Days	Projections	
		1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	52 Å	277 Å	809 Å
Unknowns	3339 Å	17672 Å	51673 Å
Totals	3391 Å	17949 Å	52482 Å
Silver Films			
AgCl	44 Å	530 Å	2650 Å
Ag ₂ S	1983 Å	24142 Å	120710 Å
Unknowns	54 Å	654 Å	3268 Å
Totals	2081 Å	25326 Å	126628 Å

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

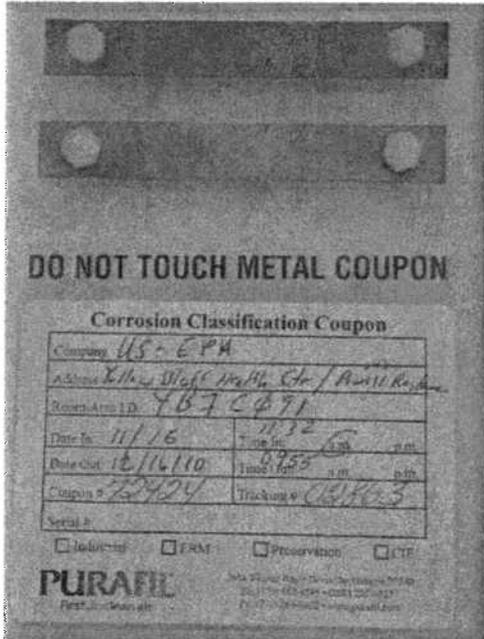
Corrosion is not a factor in determining equipment reliability. (Cu < 300)

PURAFIL ENVIRONMENTAL CORROSION REPORT

18-Jan-2011

Company: US-EPA
Yellow Bluff Health Ctr/ Powell
Resident
Sales Order #: C002863

Room Area ID: YB7C091
Serial #:
CCC Panel #: P72424
Date In: 16-Nov-2010
Date Out: 16-Dec-2010
Days in Service: 30



CCC # P72424
ISA Class GX SEVERE
Copper Corrosion 5784 Å/30 days
Silver Corrosion 2600 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72424

The electrolytic reduction analysis on Corrosion Classification Coupon # P72424 shows the presence of extremely high concentrations of contaminants and the possibility of high/variable humidity in the environment tested. The hydrogen sulfide level is expected to be in excess of 50 ppb and the sulfur dioxide level should be greater than 300 ppb. Electronic/electrical equipment is not expected to survive in this environment due to corrosive attack.

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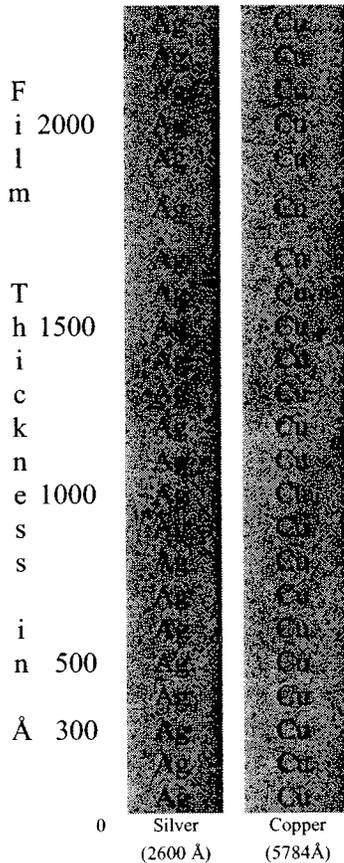
PURAFIL CCC # P72424 Analysis Results

Gold Coupon - Magnified 20x

	Corrosion Film Composition		
		Projections	
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	92 Å	484 Å	1416 Å
Unknowns	5692 Å	30123 Å	88079 Å
Totals	5784 Å	30607 Å	89495 Å
Silver Films			
AgCl	0 Å	0 Å	0 Å
Ag ₂ S	2600 Å	31658 Å	158290 Å
Unknowns	0 Å	0 Å	0 Å
Totals	2600 Å	31658 Å	158290 Å

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

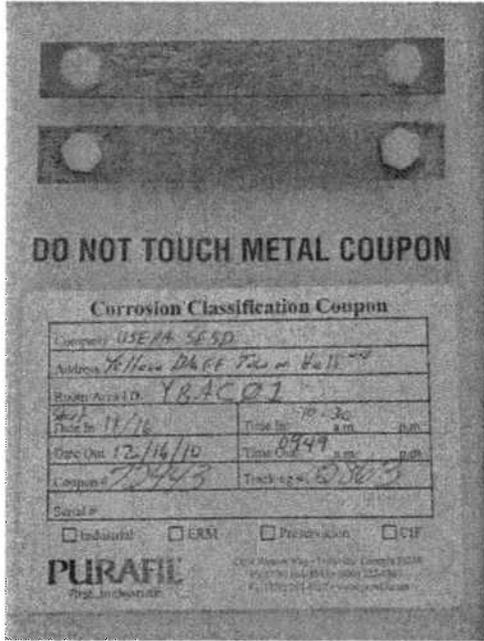
Corrosion is not a factor in determining equipment reliability. (Cu <300)

PURAFIL ENVIRONMENTAL CORROSION REPORT

18-Jan-2011

Company: US-EPA SESD Sales Order #: C002863
Yellow Bluff Town Hall

Room Area ID: YBAC01 CCC Panel #: P72443
Serial #: Date In: 16-Nov-2010
Date Out: 16-Dec-2010
Days in Service: 30



CCC # P72443
ISA Class GX SEVERE
Copper Corrosion 2922 Å/30 days
Silver Corrosion 2682 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72443

The electrolytic reduction analysis on Corrosion Classification Coupon # P72443 shows the presence of extremely high concentrations of contaminants and the possibility of high/variable humidity in the environment tested. The hydrogen sulfide level is expected to be in excess of 50 ppb, sulfur dioxide greater than 300 ppb, and chlorine greater than 10 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. Electronic/electrical equipment is not expected to survive in this environment due to corrosive attack.

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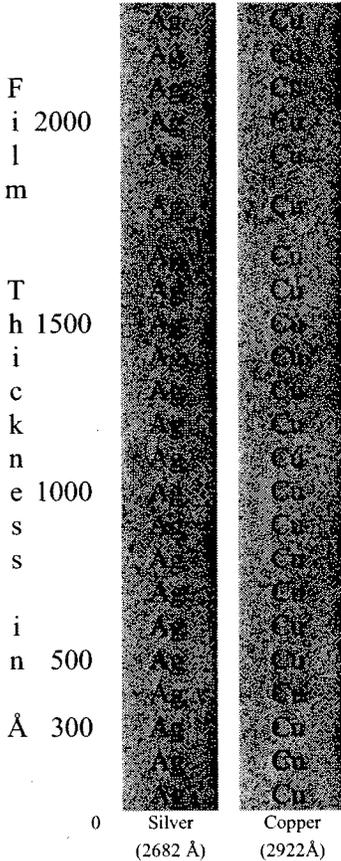
PURAFIL CCC # P72443 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition			
	30 Days	Projections	
		1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	157 Å	830 Å	2428 Å
Unknowns	2765 Å	14631 Å	42781 Å
Totals	2922 Å	15461 Å	45209 Å
Silver Films			
AgCl	29 Å	353 Å	1766 Å
Ag ₂ S	2610 Å	31772 Å	158859 Å
Unknowns	43 Å	523 Å	2614 Å
Totals	2682 Å	32648 Å	163239 Å

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

18-Jan-2011

Company: US-EPA Sales Order #: C002863
Mt. Pleasant Miss Church

Room Area ID: YB4C01 CCC Panel #: P72432
Serial #: Date In: 16-Nov-2010
Date Out: 16-Dec-2010
Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US-EPA
Address	Mt. Pleasant Miss Church
Room Area ID	YB4C01
Date In	11/16/10
Date Out	12/16/10
CCC #	P72432
Serial #	0938

Industrial FARM Powerstation CIP

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First. System. Air.

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www.purafil.com

CCC # P72432
ISA Class G2 MODERATE
Copper Corrosion 843 Å/30 days
Silver Corrosion 976 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72432

The electrolytic reduction analysis on Corrosion Classification Coupon # P72432 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, sulfur dioxide between 10 and 100 ppb, and chlorine between 1 and 2 ppb. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

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Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72432 Analysis Results

Gold Coupon - Magnified 20x

	Corrosion Film Composition		
		Projections	
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	539 Å	1882 Å	4208 Å
Unknowns	304 Å	1059 Å	2368 Å
Totals	843 Å	2941 Å	6576 Å
Silver Films			
AgCl	15 Å	177 Å	883 Å
Ag ₂ S	907 Å	11046 Å	55231 Å
Unknowns	54 Å	654 Å	3268 Å
Totals	976 Å	11877 Å	59382 Å

Note: 1000 Å = 0.1 micron

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

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ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

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ISA Class G3: HARSH

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

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Å 300

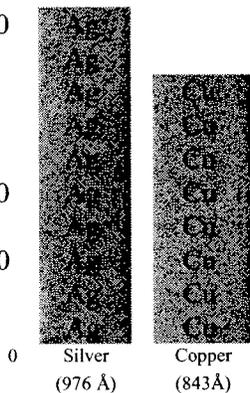
ISA Class G2: MODERATE

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

Å 300

ISA Class G1: MILD

Corrosion is not a factor in determining equipment reliability. (Cu <300)



PURAFIL ENVIRONMENTAL CORROSION REPORT

18-Jan-2011

Company: US-EPA
William Social Center A/C

Sales Order #: C002863

Room Area ID: YB2C09W

CCC Panel #: P72435

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company: <i>US EPA</i>	
Address: <i>Williams Social Center A/C</i>	
Room/Area ID: <i>YB2C09W</i>	
Date In: <i>11/16/10</i>	Date Out: <i>12/16/10</i>
Time In: <i>0920</i>	Time Out: <i>0920</i>
Coupon #: _____	Tracking #: _____

Serial #: _____

Industrial ATM Pharmaceutical CU

PURAFIL
Environmental

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Ph: (770) 662-8545 / Fax: (770) 263-6922
www.purafil.com

CCC # P72435

ISA Class G3
HARSH

Copper Corrosion
1677 Å/30 days

Silver Corrosion
322 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72435

The electrolytic reduction analysis on Corrosion Classification Coupon # P72435 shows the presence of high concentrations of contaminants and high/variable humidity in the environment tested. The hydrogen sulfide level is expected to range between 10 and 50 ppb, sulfur dioxide between 100 and 300 ppb, and chlorine between 2 and 10 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. There is a high probability that equipment reliability will be adversely affected due to corrosive attack.

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Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72435 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition	Projections		
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	154 Å	536 Å	1199 Å
Unknowns	1523 Å	5315 Å	11885 Å
Totals	1677 Å	5851 Å	13084 Å
Silver Films			
AgCl	17 Å	212 Å	1060 Å
Ag ₂ S	275 Å	3348 Å	16740 Å
Unknowns	30 Å	366 Å	1830 Å
Totals	322 Å	3926 Å	19630 Å

Note: 1000 Å = 0.1 micron

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

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ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

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Å 300

ISA Class G3: HARSH

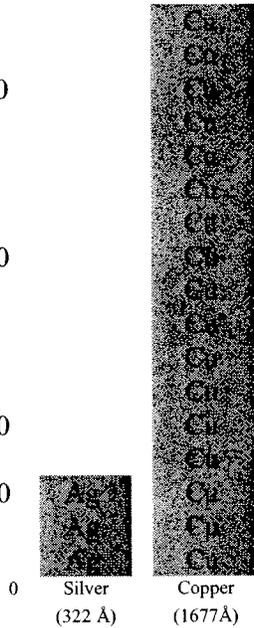
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years. (1000 <= Cu < 2000)

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 CORROSION REPORT

18-Jan-2011

Company: US-EPA
St. Lewis Church

Sales Order #: C002863

Room Area ID: YB1C01

CCC Panel #: P72438

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US EPA		
Address	St. Lewis Church		
Room Area I.D.	YB1C01		
Date In	11/16/10	Time In	15:20
Date Out	12/16/10	Time Out	9:12
Coupon #	P72438	Tracking #	12163
Serial #			

Industrial FIRM Preservation CTP

PURAFIL
Your corrosion partner

1000 W. Tower Road, Georgia 30134
Tel: (770) 662-8545 / Fax: (770) 263-6922
E-mail: purafil@purafil.com / Internet: http://www.purafil.com

CCC # P72438
ISA Class G2 MODERATE
Copper Corrosion 397 Å/30 days
Silver Corrosion 302 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72438

The electrolytic reduction analysis on Corrosion Classification Coupon # P72438 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.

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Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72438 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition			
	30 Days	Projections	
		1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	234 Å	538 Å	921 Å
Unknowns	163 Å	374 Å	640 Å
Totals	397 Å	912 Å	1561 Å
Silver Films			
AgCl	16 Å	194 Å	972 Å
Ag ₂ S	243 Å	2961 Å	14804 Å
Unknowns	43 Å	523 Å	2614 Å
Totals	302 Å	3678 Å	18390 Å

Note: 1000 Å = 0.1 micron

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

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ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

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ISA Class G3: HARSH

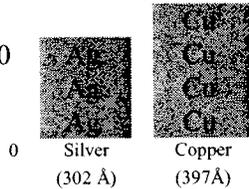
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years. (1000 <= Cu < 2000)

i
n 500

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)

Å 300



ISA Class G1: MILD

Corrosion is not a factor in determining equipment reliability. (Cu <300)

PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

18-Jan-2011

Company: US-EPA
Rolland Cooper State
Park-Background

Sales Order #: C002863

Room Area ID: YBBC01

CCC Panel #: P72425

Serial #:

Date In: 17-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 29

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US EPA
Address	Rolland Cooper State Park-Background
Room/Area ID	YBBC01
Date In	11/17/10
Date Out	12/16/10
Time In	9:10 am
Time Out	10:24 am
Collector	P72425
Inspector	12/16/10

Serial #

Industrial ERM Freeway CP

PURAFIL
P.O. Box 263
Doraville, GA 30340 USA
Tel: (770) 662-8545 Fax: (770) 263-6922
www.purafil.com

CCC # P72425

ISA Class G2
MODERATE

Copper Corrosion
352 Å/30 days

Silver Corrosion
140 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72425

The electrolytic reduction analysis on Corrosion Classification Coupon # P72425 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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Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72425 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition			
	Projections		
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	236 Å	540 Å	923 Å
Unknowns	116 Å	265 Å	453 Å
Totals	352 Å	805 Å	1376 Å
Silver Films			
AgCl	0 Å	0 Å	0 Å
Ag ₂ S	140 Å	1708 Å	8541 Å
Unknowns	0 Å	0 Å	0 Å
Totals	140 Å	1708 Å	8541 Å

Note: 1000 Å = 0.1 micron

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

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ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

T
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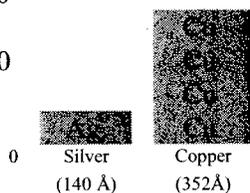
ISA Class G3: HARSH

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

i
n 500
Å 300

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

18-Jan-2011

Company: US-EPA
Blank

Sales Order #: C002863

Room Area ID: YBZC01

CCC Panel #: P72427

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company	US-EPA		
Address	Blank		
Room/Area ID	YBZ C 01		
Date In	11/16/10	Time In	15:55
Date Out	12/16/10	Time Out	14:57
CCC Panel #	P72427	Package #	P2863
Serial #			

Industrial RM Preservative CR

PURAFIL
Not to be used on

CCC # P72427

ISA Class G1
MILD

Copper Corrosion
131 Å/30 days

Silver Corrosion
75 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72427

The electrolytic reduction analysis on Corrosion Classification Coupon # P72427 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. Corrosion is not a factor in determining equipment reliability in this environment.

Your local representative for additional information and assistance is:

Contact Purafil, Inc./Chris Moon
2654 Weaver Way, Doraville GA 30340, USA
770-662-8545 Chris_Moon@Purafil.com

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / Fax (770) 263-6922
International / Purafil Europa BV / Aziesingel 30 / NL-3404 EL IJsselstein / The Netherlands
Ph. 31 30 267 67 30 / Fax 31 30 267 60 80
Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72427 Analysis Results

Gold Coupon - Magnified 20x

	Corrosion Film Composition		
		Projections	
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	131 Å	198 Å	259 Å
Unknowns	0 Å	0 Å	0 Å
Totals	131 Å	198 Å	259 Å
Silver Films			
AgCl	0 Å	0 Å	0 Å
Ag ₂ S	75 Å	911 Å	4555 Å
Unknowns	0 Å	0 Å	0 Å
Totals	75 Å	911 Å	4555 Å

Note: 1000 Å = 0.1 micron

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

F
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ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

T
h 1500
i
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e 1000
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ISA Class G3: HARSH

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

i
n 500

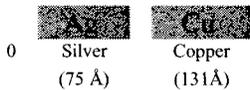
ISA Class G2: MODERATE

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

Å 300

ISA Class G1: MILD

Corrosion is not a factor in determining equipment reliability. (Cu <300)



PURAFIL ENVIRONMENTAL CORROSION REPORT

18-Jan-2011

Company: US-EPA
Williams Social Center

Sales Order #: C002863

Room Area ID: YB2C01D

CCC Panel #: P72436

Serial #:

Date In: 16-Nov-2010

Date Out: 16-Dec-2010

Days in Service: 30

DO NOT TOUCH METAL COUPON

Corrosion Classification Coupon

Company: US - EPA	Room Area ID: YB2C01D
Address: Williams Social Center	Date In: 11/16/10
Date Out: 12/16/10	Time In: 9:00 a.m.
Coupon #: P72436	Time Out: 7:26 a.m.
Tracking #: 122963	

Serial #:

Industrial CRM Preservation GIP

PURAFIL
First in Corrosion

CCC # P72436

ISA Class G2
MODERATE

Copper Corrosion
440 Å/30 days

Silver Corrosion
271 Å/30 days

(see next page for complete analysis)

Summary for PURAFIL CCC # P72436

The electrolytic reduction analysis on Corrosion Classification Coupon # P72436 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:

Contact Purafil, Inc./Chris Moon
2654 Weaver Way, Doraville GA 30340, USA
770-662-8545 Chris_Moon@Purafil.com

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / Fax (770) 263-6922
International / Purafil Europa BV / Aziesingel 30 / NL-3404 EL IJsselstein / The Netherlands
Ph. 31 30 267 67 30 / Fax 31 30 267 60 80
Email: purafil@purafil.com / Internet: http://www.purafil.com

PURAFIL CCC # P72436 Analysis Results

Gold Coupon - Magnified 20x

Corrosion Film Composition			
	Projections		
	30 Days	1 Year	5 Year
Copper Films			
Cu ₂ S	0 Å	0 Å	0 Å
Cu ₂ O	90 Å	315 Å	704 Å
Unknowns	350 Å	1220 Å	2728 Å
Totals	440 Å	1535 Å	3432 Å
Silver Films			
AgCl	0 Å	0 Å	0 Å
Ag ₂ S	271 Å	3302 Å	16512 Å
Unknowns	0 Å	0 Å	0 Å
Totals	271 Å	3302 Å	16512 Å

Note: 1000 Å = 0.1 micron

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

F
i 2000
l
m

ISA Class GX: SEVERE

Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >=2000)

T
h 1500
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ISA Class G3: HARSH

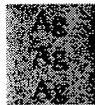
High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years. (1000 <= Cu < 2000)

i
n 500

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)

Å 300



Silver
(271 Å)



Copper
(440 Å)

ISA Class G1: MILD

Corrosion is not a factor in determining equipment reliability. (Cu < 300)