4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
Internet http://www.cortecvci.com

Evaluation of Armor Foam

Background: Cortec wanted to test the chemical composition of the submitted foam manufactured by Armor.

Purpose: Evaluate chemical composition of submitted Armor foam.

Method: Razor Blade Test
VIA test
Gas Chromatography
Nitrite

Materials: Razor Blade Test Kit
VIA Test Kit
Gas Chromatography Test Kit
Nitrite Test Kit

Procedure: The above tests were performed according to standard procedures for each.

Results:

Razor Blade Test

Material	Panel 1	Panel 2	Panel 3
Submitted Armor Foam	Fail	Fail	Fail
Control	Fail	Fail	Fail

Nitrite Test

Material	Nitrite Results
Submitted Armor Foam, Side 1	Positive
Submitted Armor Foam, Side 2	Negative

© 2007, Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited.

VIA Test

Material	Plug #1	Plug #2	Plug #3
Submitted Armor Foam	Grade 0	Grade 0	Grade 1
Control	Grade 0	Grade 0	Grade 0

Gas Chromatography Results are attached.

Conclusion: The formulation of submitted foam contains nitrite. The poor test results indicated that the chemical composition of the Armor foam includes an inadequate amount of corrosive inhibitors.

Project #: 07-215-1125

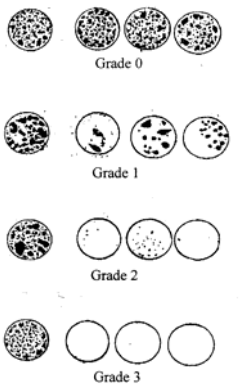
VIA Test Grades (Grade 2 or 3 are passing)

Grade 0: Blind test
No corrosion inhibiting effect

Grade 1: Blind test
Minute corrosion inhibiting effect

Grade 2: Blind test
Medium corrosion inhibiting effect

Grade 3: Blind test
Good corrosion inhibiting effect



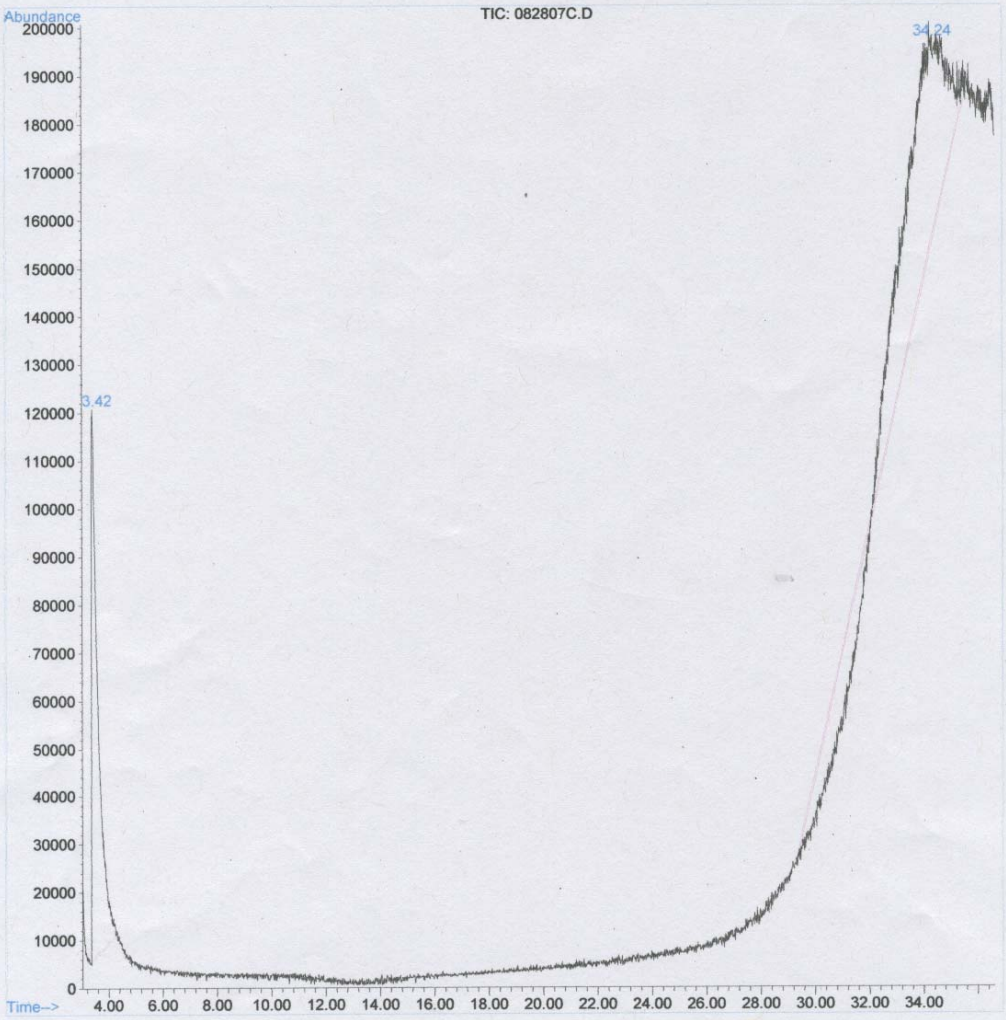
© 2007, Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited.

Area Percent Report

Data File : C:\HPCHEM\1\data\082807C.D
Acq On : 28 Aug 2007 10:54 am
Sample : DI water wash
Misc :

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Sample Amount: 0.00

MS Integration Params: autoint1.e
Method : C:\HPCHEM\1\METHODS\AMINE.M (Chemstation Integrator)
Title :



082807C.D AMINE.M Tue Aug 28 11:31:21 2007

© 2007, Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited.

an 151 (4.871 min): 082707E.D
Armor Foam

M Search of library C:\DATABASE\NBS75K.L

	Name	MolWt	Formula	Qual
.	1,3,5-Cycloheptatriene	92	C7H8	4
.	1,3,5-Cycloheptatriene	92	C7H8	4
.	Cyclobutene, 2-propenylidene-	92	C7H8	4
.	Bicyclo[3.2.0]hepta-2,6-diene	92	C7H8	3
.	Propane	44	C3H8	3
.	Propane	44	C3H8	3
.	Propane	44	C3H8	3
.	1,3,5-Cycloheptatriene	92	C7H8	2
.	Acetaldehyde	44	C2H4O	2
.	Spiro[3.3]hepta-1,5-diene	92	C7H8	2
.	Ethylene oxide	44	C2H4O	2
.	Acetaldehyde	44	C2H4O	2
.	Acetaldehyde	44	C2H4O	2
.	Ethylene oxide	44	C2H4O	2
.	1,6-Heptadiyne	92	C7H8	1
.	Ethylene oxide	44	C2H4O	1
.	1,6-Heptadiyne	92	C7H8	1
.	5-(Benzylsulphonyl)dihydro-1,3,5-dioxazi	243	C10H13NO4S	1
.	Benzeneethanamine	121	C8H11N	1
.	1,4-Butanediamine	88	C4H12N2	1

	Prob	CAS#	Ref#	K	dK	Flag	%	Con	C_1	Tilt	R_IV	XCORR
.*	4	000544-25-2	970	15	70	0	99	25	1	0	4	9626
.*	4	000544-25-2	63035	15	70	0	99	25	1	0	4	9610
.*	4	052097-85-5	964	15	63	0	99	25	1	0	4	9555
.*	3	002422-86-8	966	10	44	1	132	50	1	0	3	9473
.*	3	000074-98-6	38	10	72	0	88	75	1	0	3	2549
.*	3	000074-98-6	62269	9	69	0	100	75	1	0	3	2549
.*	3	000074-98-6	62268	9	68	0	105	75	1	0	3	2549
.*	2	000544-25-2	63036	7	83	1	153	50	1	0	2	9535
.*	2	000075-07-0	36	6	44	0	37	75	1	0	2	2549
.*	2	022635-78-5	962	6	77	1	192	50	1	0	2	9399
.*	2	000075-21-8	37	6	79	0	56	75	1	0	2	2549
.*	2	000075-07-0	62264	6	39	0	34	75	1	0	2	2549
.*	2	000075-07-0	62265	6	60	0	40	75	1	0	2	2549
.*	2	000075-21-8	62267	6	65	0	39	75	1	0	2	2549
.*	1	002396-63-6	968	5	98	1	602	50	1	0	1	8752
.*	1	000075-21-8	62266	5	67	0	46	75	1	0	1	2549
.*	1	002396-63-6	63034	4	92	1	749	50	1	0	1	8671
.	1	081763-18-0	32487	10	73	1	425	50	1	0	1	8912
.	1	000064-04-0	64606	10	74	1	1134	25	1	0	1	9574
.	1	000110-60-1	828	8	79	0	464	75	1	0	1	2549

© 2007, Cortec Corporation. All Rights Reserved. Copying of these materials in any form without the written authorization of Cortec Corporation is strictly prohibited.