TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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Client Project/Site: Paint Formulation

For:
Imperial Paints LLC
PO BOX 489
Fairforest, South Carolina 29336

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Laboratory: TestAmerica Savannah

CASE NARRATIVE

Client: Imperial Paints LLC

Project: Paint Formulation

ECOS Atmosphere Purifying Matte Light

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 11/09/2015; the samples arrived in good condition, properly preserved. The temperature of the coolers at receipt was 14.4 C.

METHOD 8260B

VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/ MASS SPECTROMETRY (GC/MS)

Method 8260 is used to determine volatile organic compounds in a variety of waste matrices. This method is applicable to nearly all types of samples, regardless of water content, including various air sampling trapping media, ground and surface water, aqueous sludges, caustic liquors, acid liquors, waste solvents, oily wastes, mousses, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalysts, soils, and sediments.

Method 8260 can be used to quantitate most volatile organic compounds that have boiling points below 200oC. Volatile, water soluble compounds can be included in this analytical technique by the use of azeotropic distillation or closed-system vacuum distillation. Such compounds include low molecular weight halogenated hydrocarbons, aromatics, ketones, nitriles, acetates, acrylates, ethers, and sulfides.

The test process used in this case analyzed the liquid coating, rather than a dry, cured sample.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/13/2015, 11/14/2015 and 11/16/2015.

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Definitions/Glossary

Client: Imperial Paints LLC
Project/Site: Paint Formulation

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
N	Presumptive evidence of material.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Results

Client: Imperial Paints LLC
Project/Site: Paint Formulation

Client Sample ID: ECOS Atmosphere Purifying Matte Light
Date Collected: 11/05/15 10:30
Date Received: 11/09/15 09:26

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Reporting Limit	Unit	Prepared	Analyzed	Dil Fac
Acetone	20	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Acetonitrile	20	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Acrolein	39	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Acrylonitrile	39	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Benzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Bromodichloromethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Bromoform	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Bromomethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
2-Butanone (MEK)	9.8	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Carbon disulfide	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Carbon tetrachloride	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Chlorobenzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Chloroprene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Chloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Chloroform	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Chloromethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Allyl chloride	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Dibromochloromethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Dibromomethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,2-Dichlorobenzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,3-Dichlorobenzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,4-Dichlorobenzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
trans-1,4-Dichloro-2-butene	3.9	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Dichlorodifluoromethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,1-Dichloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,2-Dichloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
trans-1,2-Dichloroethene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,1-Dichloroethene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,2-Dichloropropane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
cis-1,3-Dichloropropene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
trans-1,3-Dichloropropene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Ethylbenzene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Ethyl methacrylate	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
2-Hexanone	9.8	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Iodomethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Isobutanol	98	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Methacrylonitrile	20	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Methylene Chloride	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Methyl methacrylate	3.9	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
4-Methyl-2-pentanone	9.8	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Methyl tert-butyl ether	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Pentachloroethane	3.9	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Propionitrile	20	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Styrene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,1,1,2-Tetrachloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,1,2,2-Tetrachloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Tetrachloroethene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Toluene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
1,1,1-Trichloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40

Results

Client: Imperial Paints LLC
Project/Site: Paint Formulation

Client Sample ID: ECOS Atmosphere Purifying Matte Light
Date Collected: 11/05/15 10:30
Date Received: 11/09/15 09:26

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Reporting Limit	Unit	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Trichloroethene	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Trichlorofluoromethane	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Vinyl acetate	3.9	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Vinyl chloride	2.0	mg/Kg	11/12/15 14:30	11/13/15 14:51	40
Xylenes, Total	3.9	mg/Kg	11/12/15 14:30	11/13/15 14:51	40

Tentatively Identified Compounds	*Result*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Total Non Exempt	18	*mg/Kg*	*11/12/15 14:30*	*11/13/15 14:51*	*40*
Total Non Exempt	0.0	*g/l*	*11/12/15 14:30*	*11/13/15 14:51*	*40*

Surrogate	*%Recovery*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*	*30 - 130*	*11/12/15 14:30*	*11/13/15 14:51*	*40*
Dibromofluoromethane (Surr)	*93*	*30 - 130*	*11/12/15 14:30*	*11/13/15 14:51*	*40*
1,2-Dichloroethane-d4 (Surr)	*100*	*30 - 130*	*11/12/15 14:30*	*11/13/15 14:51*	*40*
4-Bromofluorobenzene (Surr)	*106*	*30 - 130*	*11/12/15 14:30*	*11/13/15 14:51*	*40*