
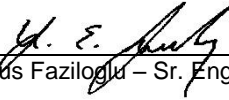




Test Report

Bureau Veritas Consumer Products Services Inc.

Report No	ET1200-4
Client	Hanchett Entry Systems, Inc.
Address	10027 S. 51st St. Ste. 102 Phoenix, AZ 85044
Phone	1-623-582-4626 x 7137
Items tested	Aperio V3 Wireless Reader (Model: R100-V3)
FCC ID	VC3-R100V3
IC	7160A-R100V3
FRN	0016550824
Equipment Code	DXX - Part 15 Low Power Communication Device Transmitter
Emission Designator	2K72F1D
FCC/IC Rule Parts	CFR Title 47 FCC Part 15.225, ISED Canada RSS-210 Issue 9 Annex B.6
Test Dates	June 5 th to 10 th , 2019
Results	As detailed within this report
Prepared by	 Christopher Hamel – EMC Engineer
Authorized by	 Yunus Faziloglu – Sr. Engineer
Issue Date	7/29/19
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 12 of this report.

Bureau Veritas Consumer Products Services Inc. is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.



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Form Final Report REV 12-07-15



Summary and Test Methodology

This test report supports an application for a Class II permissive change of a transmitter operating pursuant to:

CFR Title 47 FCC Part 15.225, ISED Canada RSS-210 Issue 9 Annex B.6

EUT is an RFID reader module operating at 13.56MHz. All testing was performed in accordance with ANSI C63.10 2013. Emissions were maximized around 3 orthogonal planes (X, Y and Z). Worst case results were recorded. EUT has an integral loop antenna.

EUT operating voltage is 3V DC via 2xAA batteries.

We found that the product met the above requirements without modification. Test sample was received in good condition.

The environmental conditions during testing are documented on the associated data tables. Following bandwidths were used during emissions testing.

Frequency	RBW	VBW
9kHz-150kHz	200Hz	1kHz
150kHz-30MHz	9kHz	30kHz
30MHz-1GHz	120kHz	1MHz

Product Tested - Configuration Documentation

EUT Configuration			
Work Order:	T1200		
Company:	Hanchett Entry Systems, Inc., DBA ASSA ABLOY (EMS&OEM) Group Company		
Company Address:	10027 S. 51st St. Ste. 102		
	Phoenix, AZ, 85044		
Contact:	Baruch Spence		
	MN	PN	SN
EUT:	R100-V3		
EUT Description:	Aperio V3 Wireless Reader		
EUT TX Frequency:	13.56MHz		
Software Operating Mode Description:			
Client supplied software			
Performance Criteria:			
EUT shall continue to update card read events in a log displayed by EAC Simulator software.			

Statement of Conformity

EUT complied with the following requirements:

RSS-GEN	RSP-100	RSS 210	Part 15	Comments
6.4			15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
	3.1		15.19	The label is shown in the label exhibit.
	3.2		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
3.2			15.31	The EUT was tested in accordance with the measurement standards in this section.
6.13.2			15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
6.13.1			15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
6.8			15.203	EUT has an integral loop antenna
8.10			15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8			15.207	N/A. EUT is battery powered.
			15.225	The unit complies with the requirements of 15.225
		Annex B.6		The unit complies with the requirements of RSS-210 Annex B.6
6.7				Occupied Bandwidth measurements were made.

Modifications Required for Compliance

None

Test Results

Fundamental Reading

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

MEASUREMENTS / RESULTS

Radiated Emissions Table												
Date: 05-Jun-19						Work Order: T1200						
Engineer: AKZ						EUT Operating Voltage/Frequency: Battery						
Temp: 22°C			Humidity: 41%			Pressure: 1010mbar						
Frequency Range: 13.56MHz						Measurement Distance: 3 m						
Notes:												
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	FCC 15.209			FCC 15.255		
							Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
Antenna Perpendicular												
X	13.56	42.3	0.0	10.9	0.4	53.6	69.5	-15.9	Pass	124.0	-70.4	Pass
Y	13.56	48.9	0.0	10.9	0.4	60.2	69.5	-9.3	Pass	124.0	-63.8	Pass
Z	13.56	49.5	0.0	10.9	0.4	60.8	69.5	-8.7	Pass	124.0	-63.2	Pass
Antenna Parallel												
X	13.56	46.1	0.0	10.9	0.4	57.4	69.5	-12.1	Pass	124.0	-66.6	Pass
Y	13.56	51.5	0.0	10.9	0.4	62.8	69.5	-6.7	Pass	124.0	-61.2	Pass
Z	13.56	51.0	0.0	10.9	0.4	62.3	69.5	-7.2	Pass	124.0	-61.7	Pass
Antenna Ground Parallel												
X	13.56	39.0	0.0	10.9	0.4	50.3	69.5	-19.2	Pass	124.0	-73.7	Pass
Y	13.56	36.3	0.0	10.9	0.4	47.6	69.5	-21.9	Pass	124.0	-76.4	Pass
Z	13.56	37.2	0.0	10.9	0.4	48.5	69.5	-21.0	Pass	124.0	-75.5	Pass
Table Result: Pass by -61.2 dB Worst Freq: 13.56 MHz												
Test Site: EMI Chamber 1			Cable 1: Asset #2456				Cable 2: Asset #2586			Cable 3: ---		
Analyzer: Asset #2093			Preamp: None				Antenna: Asset 2615 Loop			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.215												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												
Copyright Curtis-Straus LLC 2000												

Test Equipment Used

Rev. 6/20/2019								
Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due
Rental MXE EMI Receiver(1168255)	20Hz-8.4GHz	N9038A	Agilent	MY53290009	1168255	I	8/23/2018	8/23/2019
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range	Asset	Cat	Calibrated on	Calibration Due
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz	1685	I	12/7/2018	12/7/2020
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due
2615 Active Loop Antenna	9KHz-30MHz	6502	EMCO	2049	2615	I	10/30/2018	10/30/2019
Meteorological Meters/Chambers		MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	5/15/2019	5/15/2020
Asset #2659		1235C97	Control Company	181683830	2659	I	4/3/2019	4/3/2020
Cables	Range		Mfr			Cat	Calibrated on	Calibration Due
Asset #2456	9KHz-18GHz		MegaPhase			II	10/31/2018	10/31/2019
Asset #2586	9KHz-18GHz		Florida RF			II	3/19/2019	3/19/2020
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.								



(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15.848 microvolts/meter at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

Not applicable. EUT passes 15.209 limits based on its fundamental readings.

REQUIREMENT

When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is its 99% emission bandwidth, as calculated or measured.

99% Occupied Bandwidth = 2.72 kHz

Note: RBW used is higher than 5% of the OBW due to the narrowness of the emission being measured.



Radiated Spurious Emissions

The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

[15.225(d)]

MEASUREMENTS / RESULTS

Radiated Emissions Table												
Date: 05-Jun-19							Work Order: T1200					
Engineer: AKZ							EUT Operating Voltage/Frequency: Battery					
Temp: 21°C			Humidity: 41%			Pressure: 1010mbar						
Frequency Range: 9kHz-30MHz							Measurement Distance: 3 m					
Notes:												
Antenna Polarization (H/V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	FCC 15.209			---		
							Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
90	0.009	51.8	0.0	19.7	0.0	71.5	128.5	-57.0	Pass	---	---	---
90	1.0	15.4	0.0	10.7	0.2	26.3	67.6	-41.3	Pass	---	---	---
0	29.6	12.1	0.0	8.1	0.5	20.7	69.5	-48.8	Pass	---	---	---
Table Result: Pass							by -48.8 dB		Worst Freq: 29.6 MHz			
Test Site: EMI Chamber 1			Cable 1: Asset #2456				Cable 2: Asset #2586			Cable 3: ---		
Analyzer: 2093			Preamp: None				Antenna: Asset 2615 Loop			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.215							Copyright Curtis-Straus LLC 2000					
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												

Bureau Veritas Consumer Product Services Inc.

Radiated Emissions Electric Field 3m Distance

Top Peaks Horizontal 30-1000MHz

Notes:

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Work Order - T1200

EUT Power Input - Battery

Test Site - CH1

Conditions - 22°C; 41%RH; 1010mBar

Test Engineer - AKZ

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Data Taken at 05:08:57 PM, Wednesday, June 05, 2019

Frequency (MHz)	Peak Reading (dBμV)	Correction Factor (dB/m)	Adjusted Peak Amplitude (dBμV/m)	Lim2: FCC_pt15_209 (dBμV/m)	Lim2 Margin (dB)	Lim2 Test Results (Pass/Fail)	Worst Margin Lim2 (dB)
115.894	40.6	-11.2	29.4	43.5	-14.1	PASS	
123.484	43.2	-9.8	33.4	43.5	-10.1	PASS	-10.1
125.206	43.5	-10.4	33.1	43.5	-10.4	PASS	
129.158	39.8	-10.9	28.9	43.5	-14.6	PASS	
802.484	34.8	-1.7	33.1	46	-12.9	PASS	
885.419	32.7	-0.6	32.1	46	-13.9	PASS	



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Radiated Emissions Electric Field 3m Distance
30-1000MHz Vertical Data

Work Order - T1200
EUT Power Input - Battery
Test Site - CH1
Conditions - 22°C; 41%RH; 1010mBar
Test Engineer - AKZ

Notes:

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Data Taken at 05:08:57 PM, Wednesday, June 05, 2019

Frequency (MHz)	Raw QP Reading (dBμV)	Correction Factor (dB/m)	Adjusted QP Amplitude (dBμV/m)	Lim2: FCC_pt15_2 09 (dBμV/m)	Margin to Lim2 (dB)	Test Results Lim2 (Pass/Fail)	Worst Margin Lim2 (dB)
33.762	35.7	-6.4	29.3	40	-10.7	PASS	
35.636	40.6	-7.8	32.8	40	-7.2	PASS	
37.579	44.3	-9.2	35.1	40	-4.9	PASS	-4.9
40.579	45.5	-11.5	33.9	40	-6.1	PASS	
42.241	42.5	-12.7	29.8	40	-10.2	PASS	
48.568	43.7	-16.4	27.3	40	-12.7	PASS	

Rev. 6/20/2019									
Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due	
Rental MXE EMI Receiver(1168255)	20Hz-8.4GHz	N9038A	Agilent	MY53290009	1168255	I	8/23/2018	8/23/2019	
2093 MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	11/21/2018	11/21/2019	
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range	Asset	Cat	Calibrated on	Calibration Due	
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz	1685	I	12/7/2019	12/7/2020	
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due	
185710 Rental PA	9KHz-1GHz	310	SONOMA INSTRUMENT	185710		II	4/16/2019	4/16/2020	
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due	
Red-Black Bilog	30-2000MHz	JB1	Sunol	A091604-2	1106	I	4/26/2019	4/26/2021	
2615 Active Loop Antenna	9KHz-30MHz	6502	EMCO	2049	2615	I	10/30/2018	10/30/2019	
Meteorological Meters/Chambers		MN	Mfr	SN	Asset	Cat	Calibrated on	Calibration Due	
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	5/15/2019	5/15/2020	
Asset #2659		1235C97	Control Company	181683830	2659	I	4/3/2019	4/3/2020	
Cables	Range		Mfr			Cat	Calibrated on	Calibration Due	
Asset #2455	9KHz-18GHz		MegaPhase			II	10/29/2018	10/29/2019	
Asset #2456	9KHz-18GHz		MegaPhase			II	10/31/2018	10/31/2019	
Asset #2474	9KHz-18GHz		MegaPhase			II	10/31/2018	10/31/2019	
Asset #2586	9KHz-18GHz		Florida RF			II	3/19/2019	3/19/2020	
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.									

Test Equipment Used



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Temperature Stability

Limit: The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+ 50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

[FCC 15.225]

MEASUREMENTS / RESULTS

13.56MHz * 0.01% = 1356Hz Allowable tolerance

Frequency Stability Under Extreme Conditions					
Date: 6/6/2019		Work Order: T1200			
Engineer: Anna Vancheva					
Nominal Voltage: 3V DC		Min Voltage: 2.7V DC		Max Voltage: 3.3V DC	
Temperature	Voltage	Amplitude	Amplitude Delta	Frequency	Frequency Delta
°C	V	(dBm)	(dB)	(MHz)	(MHz)
-20C	Nominal	52.33	-0.22	13.560000	0.000000
-10C	Nominal	53.98	1.43	13.560000	0.000000
0C	Nominal	51.67	-0.88	13.560000	0.000000
10C	Nominal	53.21	0.66	13.560000	0.000000
Nominal (20C)	Minimum	50.96	-1.59	13.560000	0.000000
	Nominal	52.55	Reference	13.560000	Reference
	Maximum	53.07	0.52	13.560000	0.000000
30C	Nominal	52.42	-0.13	13.560000	0.000000
40C	Nominal	53.89	1.34	13.560000	0.000000
50C	Nominal	51.68	-0.87	13.560000	0.000000
Test Site: Temp/Hum Chamber #18		Antenna: Small Loop		Analyzer: 2200	
		Cable 1: CEMI-13		Voltmeter: 1866	

Test Equipment Used

Rev. 6/17/2019

Spectrum Analyzers / Receivers / Preselectors

FSV40 Signal Analyzer

Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
10Hz-40GHz	FSV40	ROHDE & SCHWARZ	101551	2200	I	10/1/2019	10/1/2018

Antennas

Small Loop

Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
10kHz-30MHz	PLA-130/A	ARA	1024	755	I	7/23/2020	7/23/2018

Cables

CEMI-13

Range	Mfr	Cat	Calibration Due	Calibrated on
9kHz - 2GHz	C-S	II	4/10/2020	4/10/2019

Meteorological Meters/Chambers

Temp/Humidity Chamber #18

MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
EPX-2H	Espec	137664	1645	I	1/2/2020	1/2/2019

RMS Voltmeters/Current Clamp

DMM

MN	Mnfr	SN	Asset	Cat	Calibration Due	Calibrated on
114	Fluke	25660084	1866	I	4/22/2020	4/22/2019

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



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Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz)		
NIST	5.6dB	N/A
CISPR	4.6dB	5.2dB (Ucisp)
Radiated Emissions (1-26.5GHz)	4.6dB	N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions		
NIST	3.9dB	N/A
CISPR	3.6dB	3.6dB (Ucisp)
Telco Conducted Emissions (Current)	2.9dB	N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23×10^{-8}	1×10^{-7}
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation:		
• Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	3.4% 0.3dB	5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		



Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names **"BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS," "MTL," "ACTS," "MTL-ACTS" and Bureau Veritas Consumer Products Services Inc.** (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only where such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.



14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B) NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder. The complete list of the Approved Subcontractors Bureau Veritas Consumer Products Services Inc. may use to delegate the performance of work can be provided upon request.

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