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April 27, 2016 Hearing Protective Device Test Report Number Q2109A Revision 0

NVLAP®

Vicsa Safety Comercial Limitada
Panamericana Norte 5151
Conchali
Santiago, Chile

Lab Code 100427-0
Date of Sample Receipt: 3/4/10
Date of Sample test: 3/4/10 – 3/14/10

Attenuation measurements have been performed according to the American National Standards Institute (ANSI) Specifications, ANSI S3.19-1974, using the experimenter-fit protocol, on the Steelpro Safety CM-501 cap-mounted muff-type hearing protector (test ID Q2109A). The specified threshold measurement data were obtained using ten normal-hearing listeners, six male and four female. These listeners were selected from a standby group of about 35 volunteers, mostly graduate students, who regularly serve as listeners for measurements of this kind.

The measurements were made in a room designed for this purpose. All acoustic characteristics of the room meet the requirements outlined in ANSI S3.19-1974. The ambient noise levels in this room are below the limits specified in ANSI S3.19-1974, and open ear thresholds are used on a continuing basis to monitor the background noise levels. An automatic recording attenuator was used to record both open and occluded ear thresholds.

Each of ten subjects was tested three times at each of nine test frequencies. The attached Tables show grand mean attenuation values in decibels (dB) for each test signal along with group attenuation values. Standard deviations (S.D.) for the 30 different attenuation determinations for each test signal are also given. The results presented in this report pertain to the samples tested only.

Michael & Associates is accredited by the National Institute of Standards and Technology (NIST) National Laboratory Accreditation Program (NVLAP) for tests performed according to ANSI S3.19-1974, ANSI S12.6-2008 and AS/NZ S1270:2002. These accreditation criteria encompass the requirements of international standard ISO 17025. This report may only be reproduced or transmitted electronically in its' entirety. This report shall not be used to claim product endorsement by NIST, NVLAP or by any agency of the U.S. Government. All measurement equipment are calibrated with instrumentation traceable to the NIST.

Use these laboratory-derived attenuation data for comparison purposes only. The amount of protection afforded in field use is often significantly lower depending on how the protectors are fitted and worn.

Kevin Michael, Ph.D.
President

4/29/16
Date
Original issue date 3/15/10

Hearing Protective Devices

Test Method: ANSI S3.19-1974
Manufacturer: Steelpro Safety
Model: CM-501

Position: Cap-mount
Date: 4/27/16
Test ID # Q2109A

FREQUENCY IN HERTZ

SUBJECT	125	250	500	1000	2000	3150	4000	6300	8000
	19	22	28	34	34	35	35	42	35
1	16	22	26	31	35	35	33	40	39
	19	24	29	36	39	39	35	42	39
	17	21	31	39	38	34	38	40	40
2	16	19	30	39	40	36	38	39	39
	17	20	32	39	38	35	36	40	37
	19	22	25	30	34	35	33	32	34
3	16	20	26	27	30	36	33	36	34
	16	20	26	32	30	33	35	37	37
	9	15	29	41	40	40	33	39	36
4	9	15	29	36	40	40	33	38	37
	12	18	29	39	39	41	38	40	36
	15	21	26	37	36	35	34	36	37
5	19	22	25	35	37	35	37	37	37
	21	22	24	35	35	35	35	35	35
	18	22	25	41	43	42	37	35	42
6	18	20	23	38	39	41	39	36	36
	18	22	24	38	41	39	37	35	38
	13	17	25	34	33	29	33	32	38
7	18	16	24	33	33	31	34	29	34
	13	16	25	35	30	29	34	32	36
	17	22	26	31	35	39	34	39	30
8	21	18	26	36	34	38	37	39	33
	16	19	26	36	37	37	38	40	34
	16	16	28	42	40	39	35	36	35
9	22	18	31	42	37	40	35	34	35
	19	21	26	40	38	40	35	35	37
	15	18	28	40	41	35	36	29	29
10	10	17	25	39	42	35	34	34	36
	12	16	27	39	40	37	38	31	36
MEANS	16.2	19.3	26.8	36.4	36.9	36.5	35.3	36.3	36.0
STD. DEV.	3.4	2.6	2.3	3.7	3.7	3.3	1.8	3.5	2.7

NRR = 23 dB

Use these laboratory-derived data for comparison purposes only. The amount of protection afforded in field use is often significantly lower depending on how the protectors are fitted and worn.

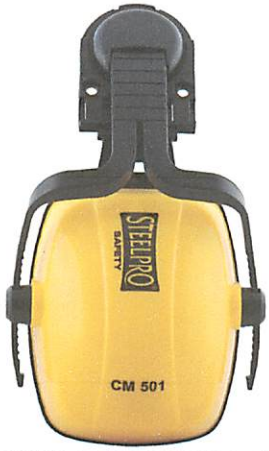
Manufacturer: Steelpro Safety
Model: CM-501
Position: Cap-mount

Date: 04/27/16
Test ID: Q2109A

Measurements were made according to American National Standards Institute Specifications ANSI S3.19-1974.

Center Frequency in Hz	Mean Attenuation in dB	Group Attenuation in dB	Standard Deviation in dB
125	16.2	35.5	3.4
250	19.3		2.6
500	26.8		2.3
1000	36.4		3.7
2000	36.9	171.9	3.7
3150	36.5		3.3
4000	35.3		1.8
6300	36.3	72.2	3.5
8000	36.0		2.7

Test Item: Q2109A



These data were obtained through measurements made at the laboratories of Michael & Associates, Inc., State College, PA , USA. Michael & Associates, Inc., is accredited to test to ANSI S3.19-1974, ANSI S12.6-2008 and AS/NZS 1270:2002 by the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP).

Kevin L. Michael, Ph.D.
President

4/27/16
Date
Original Issue Date 3/15/10