MILWAUKEE TOOL

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To Whom It May Concern,

Milwaukee®, in partnership with Industrial Hygiene Sciences, LLC, has conducted testing on the Milwaukee M18™ FUEL™ 9 Gallon Dual Battey Dust Extractor w/ PACKOUT™ Compatibility and VACLINK™ (0888-20/22HD) with the kitted HEPA Filter (49-90-1961) paired with the M18 FUEL™ 7" / 9" Large Angle Grinder (2785-20) with a 7" Turbo Masonry & Concrete Diamond Blade (49-93-9407) and Cutting Dust Shroud (49-40-6120). Results show that the user will be below the Permissible Exposure Limit (PEL) as described by OSHA 29 CFR 1926.1153 when using the above combination, assuming it is used in accordance with manufacturer's instructions. Testing results and procedures are outlined below:

Units Tested	Average Sample Duration	Average Feet Cut	% Silica (Quartz) in Sample	Average Respirable Crystalline Silica Concentration (µg/m³)	OSHA PEL in 1926.1153 (µg/m³)
	60 minutes	33.63 ft	19.3%	13.5 µg/m³ TWA	50 µg/m³

Additional Test Information

- All cutting was performed using a Milwaukee M18™ FUEL™ 9 Gallon Dual Battey Dust Extractor w/ PACKOUT™ Compatibility and VACLINK™ (0888-20/22HD) with the kitted HEPA Filter (49-90-1961) paired with the M18 FUEL™ 7" / 9" Large Angle Grinder (2785-20) with a 7" Turbo Masonry & Concrete Diamond Blade (49-93-9407) and Cutting Dust Shroud (49-40-6120).
- Each trial consisted of multiple 1-1/4" deep cuts across a concrete block.
- Concrete Blocks were poured from a 5000 PSI concrete mix into 4' X 4' X 8' frames and positioned on the floor.
- The Automated Filter Cleaning mechanism was turned on during the application.
- New HEPA filters and a clean tank were used for each new trial.
- The Dust Extractor was turned to high speed.

Sample Method

- Samples were collected on 3-piece 37 mm diameter preweighed PVC filter mounted in a BGI GK2.69 respirable dust sampler, run at 4.2 lpm and connected to a GilAir Plus air sampling pump. The flow rate through the sampling train was measured using a Mesa Labs 520 calibrator (Trials 1 & 2) or a TSI 4146 Calibrator (Trial #3) before and after each Trial. A field blank was submitted with the batch of samples.
- The samples and blank were analyzed using OSHA ID-142 by the Wisconsin Occupational Health Laboratory, an AIHA Accredited laboratory. The sampling method used meets the definition of respirable crystalline silica in 1926.1153 (a) and Appendix A of the OSHA Respirable Crystalline Silica Standard (1926.1153 and 1910.1053).
- Work was performed in a room with no outside ventilation. The room door was closed. An ambient air cleaner with HEPA filtration was used between each trial to clean the air.

TWA Calculation

- The Time Weighted Average (TWA) was calculated assuming zero exposure to respirable crystalline silica for the non-sampled portion of a 480 minutes (8 hour) shift. Longer exposure times, assuming that the dust exposures would be similar to those collected in these trials, would likely result in higher TWAs. Factors, including, but not limited to, the ventilation and air flow patterns in the space where the work is done, the condition of the dust extractor boot, the positioning of the boot on the chisel, clogging of the air intake of the boot, the silica content of

the concrete, the presence of other respirable silica dust generating activities in the area, and vacuum maintenance could affect actual user exposures.

* 1-1/4” cut depth reflects the dust generating application used in this test. The table below suggest other cutting distances and depths, based on volume of dust, would also be compliant when using the M18™ FUEL™ 9 Gallon Dual Battey Dust Extractor w/ PACKOUT™ Compatibility and VACLINK™ (0888-20/22HD).

Details on how to properly implement as a part of a complete exposure plan are outlined below*:

Maximum Feet Cut per Day**

Blade Width

Cut Depth	1/16”	7/64”	1/8”
0.25”	996’	711’	622’
0.5”	498’	355’	311’
0.75”	332’	237’	207’
1”	249’	177’	155’
1.25”	199’	142’	124’
1.5”	166’	118’	103’
1.75”	142’	101’	89’
2”	124’	89’	77’
2.25”	110’	79’	69’
2.5”	99’	71’	62’

*These calculations are offered for reference and are calculated values based on previously recorded test data and represent a full workday of the tested application

** The user must cut the same amount or less than the amount listed above for the given application in order to be considered compliant with the objective data clause of 29 CFR 1926.1153 OSHA regulation on crystalline silica dust.

It is the responsibility of the user to operate the tool in accordance with manufacturer’s instructions. For the latest listings of approvals, visit milwaukeetool.com. For technical or service assistance, contact Milwaukee Customer Service at 1-800-729-3878.