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™ 2-Gallon Wet/Dry Vacuum (0880-20) with HEPA filter paired with the M18™ FUEL™ 1-9/16" SDS MAX Rotary Hammer (2717-20), 18" SDS MAX Bull Point Chisel (48-62-4077), and 1-1/8" SDS Max Chisel Boot (5318-DE). 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	% Silica (Quartz) in Sample	Average Respirable Crystalline Silica Concentration (µg/m³)	OSHA PEL in 1926.1153 (µg/m³)
	60.5 minutes	13%	2.98 µg/m³ TWA	50 µg/m³

- All chiseling was performed using a Milwaukee M18™ 2-Gallon Wet/Dry Vacuum (0880-20) with HEPA filter paired with the M18™ FUEL™ 1-9/16" SDS MAX Rotary Hammer (2717-20), 18" SDS MAX Bull Point Chisel (48-62-4077), and 1-1/8" SDS Max Chisel Boot (5318-DE).
- The chiseling was completed in a 4' X 4' X 8" Concrete Block located on the floor.
- The concrete blocks were poured from a 5000 PSI concrete mix.
- A new HEPA filter and clean box were used for each trial.
- The HEPA filter was knocked into a garbage can after every 10 minutes of work. The vacuum box was not emptied.
- The trials were performed in an enclosure with no outside air ventilation. Ambient air cleaner with HEPA filtration was used between each trial.
- 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 TSI 4146 Calibrator before and after each Trial. A field blank was submitted with each day's set of samples.
- Samples 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).
- 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, how the tool is used, how sharp the blade is, the user's technique, the silica content of the cement board, how many cuts are made, the presence of other respirable silica dust generating activities in the area, and vacuum maintenance could affect actual user exposures.