



ACCEL® dust-preventing polymeric sand protected on-site and nearby workers

Hardscape Company Breezes Through Silica Dust Test During Paver Installation



A leading southern California hardscape company, concerned about the health and safety of on-site and nearby workers, breezed through a respirable crystalline silica dust test during a paver installation. A third-party environmental company conducted the assessment in real time as a team applied ACCEL® dust-preventing polymeric sand to the pavers.

The results showed the dust exposure during the monitored tasks, based on an eight-hour-shift, time-weighted average was lower than 1% of the personal exposure limit (PEL) mandated by the OSHA respirable crystalline silica regulation¹.

Overview

In August 2018, Covia and the hardscape company authorized the real-time analysis to confirm whether ACCEL sand reduces on-site dust and haze up to 90% compared with competing jointing sand. The test location was at a townhome construction site in southern California where the company was installing 30,000 square feet of pavers for one builder. The remaining 10,000 square feet of pavers were installed by another company using another jointing sand.

The pavers create the driveways that lead to each garage in between and in the back of the townhomes, in addition to the walkways and driveways in front. Because the location in the back was partially enclosed by the two-story townhomes, and not completely in the open air, any dust could have been suspended in the area.

“The collection of silica dust in this area between the townhomes could have been worse than in a completely open area, but our staff reported a significant reduction in dust with ACCEL sand, considerably below the OSHA regulation as the test confirmed,” said the hardscape company’s vice president.

ACCEL®

Dust-Preventing Polymeric Sand

Data collection

The typical summer weather of 80 degrees and a light wind ensured a real-world test. The purposeful data collection complied with modified National Institute for Occupational Safety and Health (NIOSH) Method 7500 and respirable particulate complying with modified NIOSH Method 0600. In addition, all sampling equipment and sampling trains met primary standards. The chain-of-custody samples were sent to an accredited laboratory.

The third-party company collected data for 2 1/2 hours in all situations where two monitored workers could be exposed to dust: when applying ACCEL sand onto the pavers and when sweeping, compacting, and blowing. The two workers and the remaining paver installation team members wore personal protective equipment (PPE), including hard hats, safety glasses, high-visibility vests, gloves, safety footwear, and dust masks.

“We’re very pleased with this analysis, and we need to be promoting ACCEL sand with every client to protect our staff and all other construction workers in the surrounding area,” said the president and CEO of the hardscape company.



Test results

The respirable crystalline silica dust test yielded conclusive results. Overall, the airborne respirable silica dust concentration was below the OSHA PEL of 50 µg/m³.

The crew member who applied the ACCEL sand and swept the sand into the pavers worked safer because that sample was below the laboratory detection limit, as was the sample where these tasks were completed. The crew member who used the compactor and power blower also worked safer because that sample showed a detectable silica dust concentration below the OSHA action level (AL) of 25 µg/m³.

Conclusion

The engineered, cleaner formula of ACCEL dust-preventing polymeric sand reduces on-site dust and haze up to 90% compared with competing jointing sand. A third-party environmental testing company determined dust exposure during the southern California paver installation was lower than 1% of the personal exposure limit (PEL) mandated by the OSHA respirable crystalline silica regulation.

¹Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.1153

For more information about ACCEL dust-preventing polymeric sand, please call 800.258.3878 or email: BlackLab.CustomerService@CoviaCorp.com

