To: Amerimix ® Customers

Date: August 31, 2017 (revised January 3, 2018 to include 3 test sites)

Re: Respirable Crystalline Silica Testing

On September 23, 2017, the Occupational Safety and Health Administration ("OSHA") is changing certain rules regarding exposure to respirable crystalline silica. Specifically, 29 CFR 1926.1153 (the "construction standard") reduces the permissible exposure limit ("PEL") for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8-hour shift. At this time, the new rules are scheduled to become effective with regard to the construction industry on September 23, 2017.

In order to proactively address OSHA's new rules, Amerimix retained Clark Testing Inc. ("Clark") to perform industrial hygiene assessments at three project sites with regard to the use of its silo systems. Clark performed the assessments at a work site where a contractor was utilizing an Amerimix's silo. The tests were completed in July 2017 for Maryland, December 2017 for Texas and Arizona.

The tests were designed to determine a worker's exposure to the respirable dust and silica over an 8-hour average shift when the worker is performing tasks associated with the silo. Some of the tasks captured by the tests included filling a silo with bags of mortar mix, mortar mix being delivered into the mixer through the chute, and bags of grout/mortar mix being manually added into the mixer.

TEST RESULTS: Clark's testing demonstrated that a worker's 8-hour average exposure to dust and silica were below the OSHA PEL. Over a 2-day period, the worker's 8-hour average exposure to dust was 2.1, 0.21 and 0.13 milligrams per cubic meter of air. OSHA's PEL for this type of exposure is 5.0 milligrams per cubic meter of air. The worker's 8-hour average exposure to crystalline silica was 12, 9 and <10 micrograms per cubic meter of air. OSHA's PEL for this type of exposure is 50 micrograms per cubic meter of air. The results of these tests at all 3 test sites can be seen on Table 1 which is attached.

NOTE: Respirable crystalline silica is present on almost all work sites. While the tests referenced above determined that a worker's exposure to dust and silica at an Amerimix silo was under the OSHA PEL, the results generated by this type of testing can vary based on a number of variables. These variables include the location of the work site, climate at the work site, the dust control devices being used at the work site, and the other types of work being permed at the work site. Further, the testing was performed at a site where the Amerimix silo was being operated in accordance with Amerimix's instructions.

Regardless of any testing, Amerimix recommends that all employees exposed to respirable dust or silica wear appropriate personal protective equipment ("PPE") as defined by OSHA. As additional engineering controls, Amerimix recommends that contractors consider utilizing dust control devices and methods. As noted in Table 2, without endorsement by Amerimix, a number of suppliers sell dust control devices that will reduce a worker's exposure to respirable contaminants. Contractors also need to perform independent industrial-hygiene assessments at specific work sites to ensure compliance with OSHA's regulations.

CLARK TESTING

Table 1

Airborne Concentrations
Respirable Crystalline Silica and Respirable Dust

Masonry Project Test Sites	Respirable Dust (8 Hour Average)		Respirable Crystalline Silica (8 Hour Average)		
	OSHA PEL mg/m^3	Project Average mg/m^3	OSHA PEL* $\mu g/m^3$	OSHA Action Level $\mu g/m^3$	Project Average $\mu g/m^3$
Maryland: 2 Day Average July 27 & 28, 2017	5.0	2.1	50	25	12
Texas: 2 Day Average Nov. 30 & Dec. 1, 2017	5.0	0.21	50	25	9
Arizona: 2 Day Average December 5 & 6, 2017	5.0	0.13	50	25	<10

*OSHA PEL (Construction) limits worker exposure to 50 micrograms crystalline silica per cubic meter of air ($\mu g/m^3$) averaged during an eight-hour shift with an Action Level of 25 $\mu g/m^3$ (29 CFR 1926.1153)

mg/m^3 – milligrams contaminant per cubic meter of air
$\mu g/m^3$ – micrograms contaminant per cubic meter of air

Crystalline Silica analysis by X-ray diffraction (NIOSH 7500)
Respirable particulate analysis by Gravimetric determination (NIOSH 0600)
Analytical services provided by Clark Testing, an American Industrial Hygiene Association-accredited laboratory