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The Americas Group

New OSHA standards implemented on Crystalline Silica

US OSHA Regulations Concerning the Use of Crystalline Silica in the Workplace

In 2016, the US Occupational Safety and Health Administration (US OSHA) implemented a new standard governing worker exposure to Respirable Crystalline Silica (RCS) during construction activities. Currently, enforcement is delayed until September 23, 2017, while OSHA obtains additional feedback from stakeholders. Our architectural paint formulas, PPE requirements and handling recommendations have not changed as a result of the new regulation.

Professional painting contractors are obligated to comply with the new standard. The standard regulates RCS exposures in the workplace using a systematic evaluation process. If a company is using a product that contains RCS, they are responsible for determining whether employee exposure exceeds the “Action Level” listed in the standard (25 micrograms of RCS/cubic meter of air; averaged over an 8 hour day). If exposures exceed the Action Level, then an employer must implement a workplace monitoring program and take action to modify work processes to prevent worker exposures above the new Permissible Exposure Limit of 50 micrograms RCS/cubic meter of air; averaged over an 8 hour workday.

Flat architectural paints contain crystalline silica (CS) as an ingredient in order to fill small surface imperfections and reduce gloss. CS may be identified on a safety data sheet as quartz, cristobalite or tridymite. CS may also be found as a contaminant in materials such as diatomaceous earth (especially when calcined), some types of limestone and talc.

Occupational CS exposures are typically linked to industrial operations such as sand blasting, mining, rock crushing and concrete cutting/drilling or grinding. While paint and coating operations typically produce limited user exposures to CS; they still fall under the same regulations as other industrial uses. This results in specific hazard communication requirements for manufacturers and occupational handling regulations for downstream users.

Recommendations:

While in general, exposures to crystalline silica from painting operations are expected to be low, there are limited data available on actual exposures. In order to comply with the standard, SW recommends that users take the following actions:

1. Possible exposures to all sources of CS in the work area need to be evaluated. CS may be found in common construction materials such as drywall, joint compound, and may be released from cement or masonry drilling, cutting and grinding operations.
2. During spray painting, applicators should wear appropriate respiratory protection² until sufficient exposure monitoring operations can be completed. Respiratory protection is not needed during brushing or rolling applications.
3. Sanding operations should be conducted using powered equipment with integrated dust collection. Alternatively, appropriate respiratory protective equipment should be worn.
4. Unprotected workers should be restricted from the work area during spraying operations or powered sanding operations conducted without dust collection. Otherwise, workers in the area performing other tasks should use appropriate personal protective equipment.
5. Clean-up of fine-particle overspray should be conducted using HEPA filtered vacuums or wet clean up methods.

¹ <https://www.osha.gov/silica/>

² See [OSHA 1926.103](#) for respiratory protection program requirements