

Public Health Advisory to Schools: Mercury in 3M Tartan flooring installed between 1950 and 1970

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It has recently come to our attention that 3M Tartan flooring used widely in the US in public buildings, schools, gymnasias, etc. from approximately 1950 through the early 1970's contains mercury as a stabilizer and with aging and mechanical damage, the mercury can escape as mercury vapor. Assessments performed at two mid-western schools by US CDC-ATSDR and by the State Health Department of Michigan confirmed the release of mercury vapor in two US schools, but concluded that the levels of mercury in the air of the buildings was safe for routine classes and normal usage. Mechanical injury and normal aging of the flooring leads to increasing release of mercury. Removal or other major disturbance of the flooring can produce dangerous levels of mercury in air, and disposal of the flooring requires special attention because of the mercury content.

You can read the ATSDR and Michigan assessments by linking to [http://www.atsdr.cdc.gov/HAC/PHA/westerville/wes\\_p1.html](http://www.atsdr.cdc.gov/HAC/PHA/westerville/wes_p1.html) and <http://michigan.gov/documents/Middleton>

Excessive mercury vapor exposure can lead to neurological injury. The levels of mercury exposure in the schools that have been assessed are not high enough to produce any immediate symptoms of illness. Exposure to the levels found in the two schools for a few hours per day are also believed to be insufficient to produce measurable long-term harm.

Workplace exposure limits for mercury vapor are 25 ug of mercury per cubic meter of air for an average 8 hour exposure period or for 40 hours per week. Residential settings in which persons (especially elderly, children and pregnant women) are exposed continuously for up to 24 hours per day, seven days per week should have much lower levels (0.2 to 0.5 ug/m<sup>3</sup>). For classroom exposures of an hour for five days per week during the school year, levels of 1-10 ug/m<sup>3</sup> in the breathing zone are considered safe by

most health authorities. The manufacturer concedes that the product contains 1000-2000 ppm mercury and can produce indoor building vapor levels as high as 22 ug/m<sup>3</sup>. In the schools assessed by ATSDR and the state of Michigan, levels of 1.6 ug/m<sup>3</sup> (Westerville) and 0.007 to 0.05 ug/m<sup>3</sup> (Fulton) were measured in the normal breathing zones of students and staff. Higher levels up to 17 ug/m<sup>3</sup> were measured at the floor in the immediate area of damaged flooring at Fulton school.

If your school facilities have any 3M Tartan flooring you may want to consider having a commercial Industrial Hygiene firm perform mercury vapor tests in affected rooms, especially if the flooring is aging, softening or breaking up. Our office is available to discuss any concerns with you and to assist you in interpreting any test findings you may have.