

Table 12: Concentrations Selected for Examining the Potential Exposure Associated with Residential Uses of Vermiculite Attic Insulation

| Exposure Scenario | Exposure Concentrations (fibers/cc) | | Sources of Exposure Concentrations |
|---|---|---|---|
| | Based on Studies Conducted in Containment Systems | Based on Studies Conducted in Houses in Vermont | |
| Active Exposures | | | |
| 1. Installing vermiculite attic insulation once in a lifetime | 0.0227 to 2.6373 | No Data | minimum and maximum values detected in attic space from personal and stationary monitors during Phase 1 simple simulations of installation of vermiculite attic insulation |
| 2a. Wiring or small renovation in an attic containing <u>dry</u> vermiculite | 0.0278 to 2.6476 | 0.0133 to 0.4053 | minimum and maximum values detected in attic space from personal and stationary monitors during Phase 2 simulations with dry vermiculite |
| 2b. Wiring or small renovation in an attic containing <u>wet</u> vermiculite | 0.0286 to 1.0003 | 0.0142 to 0.0566 | minimum and maximum values detected in attic space from personal and stationary monitors during Phase 2 simulations with wet vermiculite |
| 3. Removing vermiculite attic insulation | 0.2112 to 0.4001 | 0.0427 to 0.3013 | minimum and maximum values detected in attic space from personal and stationary monitors during Phase 2 simulations of vermiculite removal |
| 4. Using the attic with vermiculite insulation as a storage space | 0.0079 to 0.2466 | No Data | minimum and maximum values detected in attic space from personal and stationary monitors during Phase 1 complex simulation of residential activities |
| Passive Exposures | | | |
| 5. Living in a home where vermiculite attic insulation is installed once in a lifetime | 0.0078 to 0.0105 | No Data | minimum and maximum values detected in living space from stationary monitors after Phase 1 simple simulations of installation of vermiculite attic insulation (no samples were collected in living spaces during this simulation) |
| 6a. Living in a home where <u>dry</u> vermiculite attic insulation disturbance (i.e., wiring) occurs once | 0.0027 to 0.2422 | 0.0271 to 0.0408 | minimum and maximum values detected in living areas from stationary monitors during and after Phase 2 dry simulations |
| 6b. Living in a home where <u>wet</u> vermiculite attic insulation disturbance (i.e., wiring) occurs once | 0.0026 to 0.0711 | <0.0026 to <0.0136 | minimum and maximum values detected in living areas from stationary monitors during and after Phase 2 wet simulations - no asbestos fibers were detected in samples from any stationary monitors in living areas of Vermont house during or after Phase 2 wet simulations - the highest and lowest detection limits are presented |
| 7. Living in a home where dry vermiculite attic insulation is removed once | 0.0105 to 0.0885 | 0.0026 to 0.0136 | minimum and maximum values detected in living space from stationary monitors during and after Phase 2 simulations of vermiculite removal |
| 8. Living in a home where minimal vermiculite attic insulation disturbance (i.e., moving and storage of boxes in the attic) occurs 4 times per year | <0.0012 to 0.0712 | No Data | values detected from Phase 1 sampling - activities in simulated attic included moving boxes and digging trenches in vermiculite - no fibers were detected in simulated living space during or after simulation - minimum based on lowest detection limit - maximum based on highest concentration from stationary monitor in main containment "attic" - concentrations in living area are assumed to be no higher than this value |
| 9. Background Exposure (Living in a home with vermiculite attic insulation) | No Data | <0.0016 | highest limit of detection for Phase 1 air monitoring in the homes where no disturbance of the vermiculite attic insulation occurred during sampling |