

Table 1-14 (page 1 of 2). Asbestos: Geometric mean exposures and percent exceeding designated occupational exposure limits by MSHA metal/nonmetal district and state, MSHA samples, 1979-1999

MSHA Metal/Nonmetal District	All years		1979 - 1986				1987 - 1994				1995 - 1999			
	No. of Samples	GM (f/cc)	No. of Samples	GM (f/cc)	% > PEL	% > REL	No. of Samples	GM (f/cc)	% > PEL	% > REL	No. of Samples	GM (f/cc)	% > PEL	% > REL
Northeast	318	0.159	240	0.430	6.3	85.0	70	0.009	7.1	21.4	8	0.002	0.0	0.0
Connecticut	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Delaware	0	–	0	–	–	–	0	–	–	–	0	–	–	–
District of Columbia	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Maine	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Maryland	45	0.021	26	0.119	0.0	53.8	18	0.002	0.0	0.0	1	0.002	0.0	0.0
Massachusetts	1	0.002	0	–	–	–	1	0.002	0.0	0.0	0	–	–	–
New Hampshire	0	–	0	–	–	–	0	–	–	–	0	–	–	–
New Jersey	14	0.191	14	0.191	0.0	78.6	0	–	–	–	0	–	–	–
New York	40	0.187	34	0.439	0.0	91.2	6	0.002	0.0	0.0	0	–	–	–
Pennsylvania	19	0.001	0	–	–	–	12	0.002	0.0	0.0	7	0.002	0.0	0.0
Rhode Island	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Vermont	176	0.560	154	0.599	9.7	89.6	22	0.350	22.7	68.2	0	–	–	–
Virginia	20	0.031	12	0.239	0.0	83.3	8	0.002	0.0	0.0	0	–	–	–
West Virginia	3	0.002	0	–	–	–	3	0.002	0.0	0.0	0	–	–	–
Southeast	91	0.036	71	0.086	5.6	42.3	14	0.002	0.0	0.0	6	0.002	0.0	0.0
Alabama	1	0.020	0	–	–	–	1	0.020	0.0	0.0	0	–	–	–
Florida	6	0.013	6	0.013	0.0	33.3	0	–	–	–	0	–	–	–
Georgia	8	0.124	4	10.3	100.0	100.0	2	0.002	0.0	0.0	2	0.002	0.0	0.0
Kentucky	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Mississippi	0	–	0	–	–	–	0	–	–	–	0	–	–	–
North Carolina	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Puerto Rico	0	–	0	–	–	–	0	–	–	–	0	–	–	–
South Carolina	76	0.035	61	0.076	0.0	39.3	11	0.002	0.0	0.0	4	0.002	0.0	0.0
Tennessee	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Virgin Islands	0	–	0	–	–	–	0	–	–	–	0	–	–	–
North Central	354	0.007	119	0.075	0.8	45.4	172	0.002	0.0	1.7	63	0.002	0.0	0.0
Illinois	11	0.038	9	0.079	0.0	55.6	2	0.002	0.0	0.0	0	–	–	–
Indiana	1	0.010	1	0.010	0.0	0.0	0	–	–	–	0	–	–	–
Iowa	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Michigan	176	0.002	2	0.002	0.0	0.0	134	0.002	0.0	0.0	40	0.001	0.0	0.0
Minnesota	161	0.027	106	0.083	0.9	46.2	34	0.005	0.0	8.8	21	0.001	0.0	0.0
Ohio	1	0.010	1	0.010	0.0	0.0	0	–	–	–	0	–	–	–
Wisconsin	4	0.002	0	–	–	–	2	0.002	0.0	0.0	2	0.004	0.0	0.0

See footnotes at end of table.

Table 1-14 (page 2 of 2). Asbestos: Geometric mean exposures and percent exceeding designated occupational exposure limits by MSHA metal/nonmetal district and state, MSHA samples, 1979-1999

MSHA Metal/Nonmetal District	All years		1979 - 1986				1987 - 1994				1995 - 1999			
	No. of Samples	GM (f/cc)	No. of Samples	GM (f/cc)	% > PEL	% > REL	No. of Samples	GM (f/cc)	% > PEL	% > REL	No. of Samples	GM (f/cc)	% > PEL	% > REL
South Central	304	0.017	231	0.035	1.3	39.0	47	0.002	0.0	2.1	26	0.001	0.0	0.0
Arkansas	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Louisiana	45	0.002	0	–	–	–	45	0.002	0.0	2.2	0	–	–	–
Missouri	0	–	0	–	–	–	0	–	–	–	0	–	–	–
New Mexico	112	0.042	112	0.042	1.8	42.9	0	–	–	–	0	–	–	–
Oklahoma	27	0.033	27	0.033	0.0	40.7	0	–	–	–	0	–	–	–
Texas	120	0.014	92	0.028	1.1	33.7	2	0.002	0.0	0.0	26	0.001	0.0	0.0
Rocky Mountain	254	0.211	225	0.324	4.9	87.1	29	0.008	0.0	20.7	0	0.000	0.0	0.0
Arizona	89	0.525	89	0.525	11.2	92.1	0	–	–	–	0	–	–	–
Colorado	35	0.055	31	0.088	0.0	64.5	4	0.002	0.0	0.0	0	–	–	–
Kansas	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Montana	74	0.278	62	0.376	1.6	91.9	12	0.058	0.0	50.0	0	–	–	–
Nebraska	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Nevada	6	0.002	0	–	–	–	6	0.002	0.0	0.0	0	–	–	–
North Dakota	0	–	0	–	–	–	0	–	–	–	0	–	–	–
South Dakota	47	0.157	41	0.287	0.0	90.2	6	0.003	0.0	0.0	0	–	–	–
Utah	3	0.005	2	0.010	0.0	0.0	1	0.002	0.0	0.0	0	–	–	–
Wyoming	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Western	194	0.158	135	0.389	14.8	83.0	45	0.025	0.0	37.8	14	0.010	0.0	21.4
Alaska	0	–	0	–	–	–	0	–	–	–	0	–	–	–
California	185	0.195	128	0.515	15.6	87.5	43	0.029	0.0	39.5	14	0.010	0.0	21.4
Hawaii	1	0.002	0	–	–	–	1	0.002	0.0	0.0	0	–	–	–
Idaho	1	0.002	0	–	–	–	1	0.002	0.0	0.0	0	–	–	–
Oregon	0	–	0	–	–	–	0	–	–	–	0	–	–	–
Washington	7	0.002	7	0.002	0.0	0.0	0	–	–	–	0	–	–	–
TOTAL	1,515	0.046	1,021	0.165	5.3	67.2	377	0.004	1.3	11.1	117	0.002	0.0	2.6

– indicates incalculable field

PEL - permissible exposure limit REL - recommended exposure limit GM - geometric mean f/cc - fibers per cubic centimeter

NOTE: The MSHA PEL is 2 f/cc. The NIOSH REL is 0.1 f/cc. See appendices for source description, methods, and agents.

SOURCE: Mine Safety and Health Administration (MSHA) metal/nonmetal mine data.