

Table 4-11. Cotton dust: Geometric mean exposures and percent exceeding designated occupational exposure limits by cotton process, OSHA samples, 1980-1999

Process		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Yarn Manufacturing & Cotton Washing (PEL = 0.2 mg/m ³)	GM (mg/m ³)	-	0.233	0.131	0.163	0.169	0.208	0.215	0.300	0.139	0.170	0.147	0.147	0.131	0.185	0.088	0.088	0.070	0.465	-	0.137
	No. of samples	0	7	67	130	54	70	46	17	35	8	17	88	104	39	36	31	6	4	0	7
	% > PEL	-	57.1	28.4	28.5	40.7	52.9	45.7	70.6	28.6	37.5	23.5	25.0	28.8	35.9	13.9	12.9	0.0	100.0	-	14.3
	% > REL	-	57.1	28.4	28.5	40.7	52.9	45.7	70.6	28.6	37.5	23.5	25.0	28.8	35.9	13.9	12.9	0.0	100.0	-	14.3
Textile Mill Waste House or Dust from Lower-Grade Cotton Washing During Yarn Manufacturing (PEL = 0.5 mg/m ³)	GM (mg/m ³)	-	-	0.157	0.174	0.088	0.172	-	0.703	-	-	0.371	0.230	0.156	0.593	-	0.192	-	-	-	-
	No. of samples	0	0	5	10	8	7	0	4	0	0	1	7	8	17	0	4	0	0	0	0
	% > PEL	-	-	0.0	20.0	0.0	14.3	-	100.0	-	-	0.0	14.3	0.0	70.6	-	50.0	-	-	-	-
	% > REL	-	-	40.0	20.0	25.0	28.6	-	100.0	-	-	100.0	28.6	25.0	94.1	-	50.0	-	-	-	-
Textile Slashing and Weaving (PEL = 0.75 mg/m ³)	GM (mg/m ³)	-	-	0.396	0.054	0.252	0.616	0.223	-	0.035	-	0.383	0.127	0.978	-	0.143	0.196	0.261	-	0.096	-
	No. of samples	0	0	12	16	7	9	4	0	2	0	3	11	4	0	3	4	5	0	6	0
	% > PEL	-	-	25.0	6.3	14.3	11.1	0.0	-	0.0	-	0.0	0.0	100.0	-	0.0	0.0	0.0	-	0.0	-
	% > REL	-	-	83.3	18.8	71.4	100.0	50.0	-	0.0	-	100.0	45.5	100.0	-	66.7	75.0	80.0	-	33.3	-
Cotton Waste Processing/ Recycling & Garnetting (PEL = 1.0 mg/m ³)	GM (mg/m ³)	0.002	4.90	0.485	0.597	-	1.77	0.818	0.949	-	0.896	0.212	0.233	0.173	0.521	3.00	-	-	0.078	0.372	-
	No. of samples	1	3	4	8	0	4	13	7	0	2	2	16	10	5	1	0	0	2	2	0
	% > PEL	0.0	100.0	25.0	37.5	-	50.0	23.1	42.9	-	0.0	0.0	0.0	0.0	20.0	100.0	-	-	0.0	0.0	-
	% > REL	0.0	100.0	100.0	50.0	-	75.0	100.0	100.0	-	100.0	50.0	50.0	30.0	80.0	100.0	-	-	0.0	100.0	-

- indicates incalculable field

PEL - permissible exposure limit

REL - recommended exposure limit

GM - geometric mean

mg/m³ - milligrams per cubic meter

NOTE: The NIOSH REL is 0.2 mg/m³. See appendices for source description, methods, and agents.

SOURCE: Occupational Safety and Health Administration (OSHA) Integrated Management Information System.