

**Table 128: Muons in Cadmium tungstate ( $\text{CdWO}_4$ )**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.42747	7.900	468.3	0.12861	2.9150	0.0123	3.5941	5.3594	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]	
10.0 MeV	$4.704 \times 10^1$	4.680				4.680	$1.208 \times 10^0$	
14.0 MeV	$5.616 \times 10^1$	3.693				3.693	$2.180 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	2.916				2.916	$4.028 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.288				2.288	$7.952 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	1.968				1.968	$1.269 \times 10^1$	
80.0 MeV	$1.527 \times 10^2$	1.496				1.496	$3.671 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.411				1.412	$5.050 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.329				1.329	$7.985 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.287				1.288	$1.259 \times 10^2$	
253. MeV	$3.431 \times 10^2$	1.280	0.000			1.281	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.283	0.000		0.000	1.284	$2.039 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.300	0.000		0.000	1.301	$2.813 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.382	0.001		0.000	1.383	$5.792 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.415	0.001		0.000	1.416	$7.221 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.468	0.002	0.000	0.001	1.470	$9.990 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.525	0.003	0.001	0.001	1.530	$1.399 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.591	0.005	0.003	0.001	1.600	$2.037 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.636	0.007	0.005	0.002	1.650	$2.652 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	1.739	0.018	0.016	0.003	1.777	$4.979 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	1.770	0.024	0.023	0.004	1.821	$6.090 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	1.815	0.036	0.038	0.006	1.894	$8.242 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	1.859	0.056	0.062	0.008	1.985	$1.133 \times 10^4$	
30.0 GeV	$3.011 \times 10^4$	1.906	0.091	0.108	0.011	2.119	$1.621 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	1.938	0.129	0.159	0.015	2.242	$2.079 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.008	0.292	0.384	0.029	2.714	$3.697 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.029	0.379	0.505	0.037	2.950	$4.404 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.060	0.556	0.754	0.051	3.422	$5.662 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.092	0.833	1.149	0.072	4.148	$7.253 \times 10^4$	
203. GeV	$2.036 \times 10^5$	2.094	0.849	1.171	0.074	4.189	<i>Muon critical energy</i>	
300. GeV	$3.001 \times 10^5$	2.128	1.307	1.809	0.108	5.353	$9.370 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.153	1.796	2.492	0.144	6.588	$1.105 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.214	3.818	5.298	0.292	11.623	$1.557 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.234	4.856	6.733	0.367	14.192	$1.712 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.265	6.936	9.596	0.520	19.318	$1.953 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.297	10.119	13.965	0.752	27.134	$2.214 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.335	15.431	21.225	1.150	40.143	$2.515 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.362	20.814	28.564	1.555	53.295	$2.730 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.428	42.515	58.062	3.232	106.238	$3.252 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.450	53.449	72.889	4.094	132.884	$3.420 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.483	75.259	102.475	5.863	186.081	$3.673 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.519	108.165	147.043	8.575	266.303	$3.941 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.560	162.946	221.195	13.264	399.966	$4.245 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	2.590	217.921	295.524	18.065	534.102	$4.461 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	2.664	438.147	593.039	38.125	1071.976	$4.979 \times 10^5$	
100. TeV	$1.000 \times 10^8$	2.688	548.444	741.930	48.490	1341.553	$5.146 \times 10^5$	