

**Table 259: Muons in Tetrachloroethylene C<sub>2</sub>C<sub>14</sub>**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.48241	1.625	159.2	0.18595	3.0156	0.1713	2.9083	4.6619	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	$4.704 \times 10^1$	6.248				6.248	$8.915 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	4.893				4.893	$1.622 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	3.836				3.836	$3.023 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	2.988				2.988	$6.017 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.558				2.558	$9.657 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	1.932				1.932	$2.821 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.819				1.819	$3.891 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.705				1.706	$6.172 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.645				1.645	$9.767 \times 10^1$	
277. MeV	$3.683 \times 10^2$	1.629			0.000	1.630	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.630			0.000	1.630	$1.589 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.644			0.000	1.645	$2.200 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.728	0.000		0.000	1.728	$4.571 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.763	0.000		0.000	1.764	$5.717 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.819	0.001	0.000	0.001	1.820	$7.947 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.879	0.001	0.001	0.001	1.882	$1.119 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.948	0.002	0.001	0.001	1.952	$1.640 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	1.995	0.003	0.002	0.002	2.002	$2.145 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.101	0.007	0.007	0.004	2.118	$4.081 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.133	0.009	0.009	0.005	2.156	$5.016 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.179	0.014	0.015	0.006	2.213	$6.846 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.224	0.021	0.024	0.009	2.278	$9.516 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.272	0.034	0.042	0.013	2.362	$1.382 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.305	0.049	0.062	0.017	2.432	$1.799 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.378	0.110	0.149	0.032	2.670	$3.366 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.401	0.142	0.196	0.040	2.780	$4.100 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.434	0.209	0.294	0.056	2.994	$5.486 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.470	0.314	0.449	0.079	3.313	$7.391 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.510	0.494	0.710	0.119	3.833	$1.019 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.538	0.680	0.981	0.158	4.358	$1.264 \times 10^5$	
548. GeV	$5.479 \times 10^5$	2.569	0.962	1.390	0.217	5.139	<i>Muon critical energy</i>	
800. GeV	$8.001 \times 10^5$	2.607	1.452	2.096	0.320	6.476	$2.012 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.630	1.850	2.669	0.402	7.552	$2.298 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.664	2.649	3.813	0.570	9.696	$2.764 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.701	3.874	5.561	0.825	12.962	$3.298 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.743	5.923	8.469	1.263	18.398	$3.942 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.773	8.003	11.411	1.708	23.896	$4.418 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.848	16.406	23.251	3.560	46.065	$5.603 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.873	20.648	29.208	4.512	57.241	$5.991 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.910	29.116	41.084	6.471	79.582	$6.581 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.951	41.911	58.983	9.477	113.323	$7.210 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	2.998	63.188	88.779	14.686	169.651	$7.927 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.031	84.554	118.660	20.026	226.273	$8.435 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	3.114	170.213	238.272	42.383	453.983	$9.659 \times 10^5$	
100. TeV	$1.000 \times 10^8$	3.142	213.142	298.140	53.952	568.376	$1.005 \times 10^6$	