

**Table 148: Muons in 1,2-Dichloroethane C<sub>2</sub>H<sub>4</sub>C<sub>12</sub>**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.50526	1.235	111.9	0.13383	3.1675	0.1375	2.9529	4.1849	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	$4.704 \times 10^1$	6.875				6.875	$8.071 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.373				5.373	$1.472 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.205				4.205	$2.749 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.268				3.269	$5.484 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.795				2.795	$8.814 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.103				2.103	$2.583 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.975				1.975	$3.567 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.846				1.846	$5.671 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.775				1.775	$8.999 \times 10^1$	
293. MeV	$3.844 \times 10^2$	1.753			0.000	1.753	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.753			0.000	1.753	$1.468 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.764			0.000	1.764	$2.038 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.844	0.000		0.000	1.845	$4.255 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.879	0.000		0.000	1.879	$5.329 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.934	0.001	0.000	0.001	1.936	$7.424 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.996	0.001	0.000	0.001	1.998	$1.047 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	2.065	0.002	0.001	0.001	2.069	$1.538 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.113	0.002	0.002	0.002	2.119	$2.016 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.221	0.006	0.006	0.004	2.237	$3.847 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.254	0.008	0.008	0.005	2.275	$4.733 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.301	0.012	0.013	0.006	2.333	$6.468 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.348	0.019	0.022	0.009	2.398	$9.004 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.398	0.031	0.038	0.013	2.480	$1.310 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.432	0.044	0.056	0.017	2.549	$1.708 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.508	0.099	0.135	0.033	2.776	$3.209 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.532	0.129	0.177	0.041	2.879	$3.916 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.567	0.189	0.266	0.057	3.080	$5.259 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.604	0.284	0.406	0.080	3.376	$7.119 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.646	0.447	0.642	0.120	3.857	$9.889 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.676	0.616	0.888	0.160	4.341	$1.233 \times 10^5$	
627. GeV	$6.275 \times 10^5$	2.723	1.011	1.459	0.253	5.447	<i>Muon critical energy</i>	
800. GeV	$8.001 \times 10^5$	2.748	1.317	1.900	0.324	6.290	$1.994 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.772	1.678	2.420	0.407	7.277	$2.290 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.808	2.403	3.457	0.578	9.247	$2.776 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.846	3.516	5.045	0.836	12.244	$3.339 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.890	5.378	7.685	1.280	17.234	$4.024 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.922	7.268	10.358	1.732	22.281	$4.533 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.001	14.909	21.113	3.611	42.634	$5.809 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.027	18.767	26.525	4.578	52.897	$6.229 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.066	26.470	37.314	6.567	73.417	$6.868 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.108	38.110	53.576	9.622	104.416	$7.550 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.157	57.470	80.645	14.916	156.189	$8.328 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.193	76.914	107.793	20.346	208.246	$8.881 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	3.280	154.871	216.464	43.095	417.710	$1.021 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.308	193.942	270.857	54.873	522.981	$1.064 \times 10^6$	