

**Table 152: Muons in Ethane (C<sub>2</sub>H<sub>6</sub>)**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.59861	$1.263 \times 10^{-3}$	45.4	0.09627	3.6095	1.5090	3.8726	9.0965	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	$4.704 \times 10^1$	9.147				9.147	$6.016 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	7.119				7.119	$1.103 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	5.547				5.548	$2.068 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	4.294				4.294	$4.146 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.661				3.661	$6.685 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.739				2.739	$1.972 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.573				2.573	$2.728 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.409				2.409	$4.342 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.323				2.323	$6.888 \times 10^1$	
267. MeV	$3.577 \times 10^2$	2.304			0.000	2.304	<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	2.307			0.000	2.307	$1.122 \times 10^2$	
400. MeV	$4.945 \times 10^2$	2.333			0.000	2.333	$1.553 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.478	0.000		0.000	2.479	$3.216 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.540	0.000		0.000	2.541	$4.012 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.642	0.000		0.001	2.643	$5.555 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.757	0.000	0.000	0.001	2.759	$7.774 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.892	0.001	0.000	0.001	2.895	$1.131 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.979	0.001	0.001	0.002	2.983	$1.471 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	3.158	0.003	0.003	0.004	3.168	$2.766 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	3.210	0.004	0.004	0.005	3.222	$3.392 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	3.283	0.005	0.006	0.007	3.302	$4.617 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	3.355	0.009	0.010	0.009	3.383	$6.411 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	3.428	0.014	0.017	0.014	3.474	$9.326 \times 10^3$	
40.0 GeV	$4.011 \times 10^4$	3.476	0.020	0.025	0.018	3.540	$1.218 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	3.580	0.046	0.062	0.035	3.723	$2.317 \times 10^4$	
100. GeV	$1.001 \times 10^5$	3.611	0.060	0.081	0.043	3.796	$2.849 \times 10^4$	
140. GeV	$1.401 \times 10^5$	3.656	0.088	0.123	0.060	3.927	$3.885 \times 10^4$	
200. GeV	$2.001 \times 10^5$	3.702	0.133	0.188	0.085	4.108	$5.378 \times 10^4$	
300. GeV	$3.001 \times 10^5$	3.752	0.211	0.300	0.128	4.391	$7.732 \times 10^4$	
400. GeV	$4.001 \times 10^5$	3.788	0.292	0.416	0.171	4.666	$9.940 \times 10^4$	
800. GeV	$8.001 \times 10^5$	3.874	0.629	0.903	0.345	5.750	$1.765 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.901	0.804	1.155	0.433	6.293	$2.097 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	3.944	1.156	1.657	0.614	7.371	$2.684 \times 10^5$	
1.60 TeV	$1.603 \times 10^6$	3.961	1.338	1.916	0.707	7.922	<i>Muon critical energy</i>	
2.00 TeV	$2.000 \times 10^6$	3.989	1.698	2.428	0.889	9.005	$3.419 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	4.042	2.609	3.712	1.363	11.726	$4.390 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	4.080	3.537	5.015	1.845	14.477	$5.156 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	4.172	7.302	10.268	3.855	25.597	$7.207 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	4.203	9.209	12.915	4.890	31.218	$7.913 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	4.250	13.016	18.188	7.026	42.480	$9.008 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	4.300	18.781	26.144	10.309	59.534	$1.020 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	4.358	28.385	39.377	16.013	88.134	$1.157 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	4.400	38.048	52.656	21.871	116.975	$1.255 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	4.503	76.798	105.818	46.487	233.606	$1.492 \times 10^6$	
100. TeV	$1.000 \times 10^8$	4.537	96.230	132.432	59.258	292.458	$1.569 \times 10^6$	