

**Table 097: Muons in Berkelium**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
97 (Bk)	[247.07031 (4)]	??	952.0	0.25556	3.0000	0.5509	3.0000	6.2912	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	$4.704 \times 10^1$	3.662				3.662	$1.604 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	2.938				2.938	$2.834 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.351				2.351	$5.140 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	1.866				1.866	$9.973 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.616				1.616	$1.576 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.250				1.251	$4.472 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.187				1.187	$6.117 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.129				1.129	$9.588 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.106				1.107	$1.497 \times 10^2$		
212. MeV	$2.999 \times 10^2$	1.106	0.000			1.106	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.119	0.000		0.000	1.119	$2.398 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.145	0.000		0.000	1.145	$3.281 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.237	0.001		0.000	1.239	$6.631 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.272	0.002		0.000	1.274	$8.222 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.326	0.003		0.000	1.329	$1.129 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.383	0.005	0.001	0.001	1.389	$1.570 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.446	0.008	0.003	0.001	1.459	$2.271 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.489	0.012	0.006	0.002	1.509	$2.945 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.583	0.029	0.024	0.003	1.639	$5.478 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.611	0.038	0.034	0.004	1.688	$6.680 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.651	0.059	0.056	0.005	1.771	$8.992 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.690	0.091	0.092	0.007	1.882	$1.228 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.730	0.150	0.164	0.011	2.056	$1.736 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.757	0.212	0.242	0.014	2.227	$2.203 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.818	0.479	0.591	0.027	2.916	$3.769 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.836	0.620	0.779	0.034	3.271	$4.416 \times 10^4$		
125. GeV	$1.248 \times 10^5$	1.854	0.798	1.015	0.042	3.711	<i>Muon critical energy</i>		
140. GeV	$1.401 \times 10^5$	1.864	0.911	1.166	0.047	3.989	$5.522 \times 10^4$		
200. GeV	$2.001 \times 10^5$	1.893	1.364	1.780	0.067	5.106	$6.850 \times 10^4$		
300. GeV	$3.001 \times 10^5$	1.925	2.138	2.805	0.101	6.971	$8.521 \times 10^4$		
400. GeV	$4.001 \times 10^5$	1.948	2.938	3.867	0.134	8.889	$9.788 \times 10^4$		
800. GeV	$8.001 \times 10^5$	2.004	6.235	8.222	0.271	16.735	$1.302 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.023	7.927	10.449	0.341	20.742	$1.409 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.051	11.316	14.891	0.483	28.742	$1.572 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.080	16.495	21.668	0.698	40.943	$1.746 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.115	25.134	32.928	1.067	61.246	$1.945 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.140	33.883	44.307	1.441	81.772	$2.085 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.201	69.129	90.039	2.991	164.361	$2.424 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.221	86.879	113.023	3.786	205.911	$2.532 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.251	122.282	158.887	5.417	288.838	$2.695 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.284	175.674	227.972	7.914	413.846	$2.868 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.322	264.646	342.902	12.227	622.099	$3.064 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.350	353.935	458.095	16.639	831.021	$3.202 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.417	711.071	919.187	35.048	1667.725	$3.535 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.439	889.750	1149.940	44.550	2086.682	$3.642 \times 10^5$		