

Table 226: Muons in Polystyrene ($[\text{C}_6\text{H}_5\text{CHCH}_2]_n$)

	$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
	0.53768	1.060	68.7	0.16454	3.2224	0.1647	2.5031	3.2999	0.00
T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm ²]		
10.0 MeV	4.704×10^1	7.803				7.803	7.077×10^{-1}		
14.0 MeV	5.616×10^1	6.084				6.084	1.294×10^0		
20.0 MeV	6.802×10^1	4.749				4.749	2.424×10^0		
30.0 MeV	8.509×10^1	3.683				3.683	4.848×10^0		
40.0 MeV	1.003×10^2	3.144				3.144	7.806×10^0		
80.0 MeV	1.527×10^2	2.359				2.359	2.296×10^1		
100. MeV	1.764×10^2	2.210				2.211	3.174×10^1		
140. MeV	2.218×10^2	2.058				2.058	5.059×10^1		
200. MeV	2.868×10^2	1.970				1.971	8.049×10^1		
300. MeV	3.917×10^2	1.937			0.000	1.937	1.318×10^2		
318. MeV	4.105×10^2	1.936			0.000	1.936	<i>Minimum ionization</i>		
400. MeV	4.945×10^2	1.942			0.000	1.943	1.834×10^2		
800. MeV	8.995×10^2	2.015	0.000		0.000	2.015	3.856×10^2		
1.00 GeV	1.101×10^3	2.048	0.000		0.000	2.049	4.841×10^2		
1.40 GeV	1.502×10^3	2.102	0.000		0.001	2.103	6.767×10^2		
2.00 GeV	2.103×10^3	2.161	0.000	0.000	0.001	2.163	9.578×10^2		
3.00 GeV	3.104×10^3	2.228	0.001	0.001	0.001	2.231	1.413×10^3		
4.00 GeV	4.104×10^3	2.275	0.001	0.001	0.002	2.279	1.856×10^3		
8.00 GeV	8.105×10^3	2.382	0.003	0.003	0.004	2.391	3.564×10^3		
10.0 GeV	1.011×10^4	2.414	0.004	0.004	0.005	2.427	4.394×10^3		
14.0 GeV	1.411×10^4	2.461	0.006	0.006	0.007	2.480	6.023×10^3		
20.0 GeV	2.011×10^4	2.509	0.009	0.010	0.009	2.538	8.413×10^3		
30.0 GeV	3.011×10^4	2.560	0.015	0.018	0.014	2.607	1.230×10^4		
40.0 GeV	4.011×10^4	2.596	0.021	0.027	0.018	2.662	1.609×10^4		
80.0 GeV	8.011×10^4	2.677	0.049	0.065	0.035	2.825	3.065×10^4		
100. GeV	1.001×10^5	2.702	0.063	0.086	0.043	2.895	3.765×10^4		
140. GeV	1.401×10^5	2.740	0.093	0.130	0.059	3.022	5.116×10^4		
200. GeV	2.001×10^5	2.779	0.141	0.199	0.084	3.203	7.044×10^4		
300. GeV	3.001×10^5	2.824	0.222	0.316	0.126	3.489	1.003×10^5		
400. GeV	4.001×10^5	2.855	0.307	0.439	0.168	3.770	1.279×10^5		
800. GeV	8.001×10^5	2.932	0.661	0.951	0.340	4.884	2.208×10^5		
1.00 TeV	1.000×10^6	2.957	0.844	1.216	0.428	5.445	2.596×10^5		
1.18 TeV	1.183×10^6	2.976	1.011	1.456	0.509	5.953	<i>Muon critical energy</i>		
1.40 TeV	1.400×10^6	2.995	1.212	1.743	0.606	6.558	3.265×10^5		
2.00 TeV	2.000×10^6	3.036	1.779	2.552	0.878	8.246	4.079×10^5		
3.00 TeV	3.000×10^6	3.083	2.730	3.899	1.346	11.059	5.123×10^5		
4.00 TeV	4.000×10^6	3.117	3.698	5.266	1.822	13.903	5.928×10^5		
8.00 TeV	8.000×10^6	3.201	7.621	10.772	3.804	25.399	8.025×10^5		
10.0 TeV	1.000×10^7	3.228	9.606	13.547	4.825	31.207	8.734×10^5		
14.0 TeV	1.400×10^7	3.270	13.568	19.074	6.931	42.843	9.824×10^5		
20.0 TeV	2.000×10^7	3.315	19.563	27.412	10.166	60.456	1.100×10^6		
30.0 TeV	3.000×10^7	3.367	29.546	41.284	15.784	89.982	1.234×10^6		
40.0 TeV	4.000×10^7	3.405	39.586	55.203	21.551	119.744	1.331×10^6		
80.0 TeV	8.000×10^7	3.498	79.826	110.926	45.767	240.016	1.562×10^6		
100. TeV	1.000×10^8	3.528	99.994	138.821	58.325	300.668	1.636×10^6		