

**Table 225: Muons in Polypropylene ( $[\text{CH}(\text{CH}_3)\text{CH}_2]_n$ )**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.55998	0.905	57.4	0.12108	3.4292	0.1452	2.5259	3.0395	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	$4.704 \times 10^1$	8.313				8.313	$6.632 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.476				6.476	$1.214 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	5.052				5.052	$2.275 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.914				3.914	$4.556 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.340				3.340	$7.340 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.500				2.500	$2.162 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.340				2.340	$2.991 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.176				2.176	$4.772 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.081				2.081	$7.603 \times 10^1$	
300. MeV	$3.917 \times 10^2$	2.042			0.000	2.042	$1.247 \times 10^2$	
328. MeV	$4.211 \times 10^2$	2.041			0.000	2.041	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	2.045			0.000	2.046	$1.737 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.116	0.000		0.000	2.117	$3.660 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.149	0.000		0.000	2.150	$4.597 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.204	0.000		0.001	2.205	$6.433 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.264	0.000	0.000	0.001	2.266	$9.115 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.332	0.001	0.000	0.001	2.335	$1.346 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.380	0.001	0.001	0.002	2.384	$1.769 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.490	0.003	0.003	0.004	2.499	$3.403 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.523	0.004	0.004	0.005	2.536	$4.197 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.572	0.006	0.006	0.007	2.591	$5.757 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.621	0.009	0.010	0.009	2.650	$8.046 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.675	0.015	0.018	0.014	2.721	$1.177 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.712	0.021	0.026	0.018	2.777	$1.540 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.796	0.047	0.063	0.035	2.942	$2.938 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.823	0.061	0.084	0.043	3.011	$3.609 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.862	0.091	0.126	0.060	3.138	$4.910 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.903	0.137	0.193	0.085	3.318	$6.769 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.949	0.216	0.307	0.127	3.600	$9.661 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.982	0.299	0.427	0.170	3.878	$1.234 \times 10^5$	
800. GeV	$8.001 \times 10^5$	3.062	0.644	0.925	0.343	4.974	$2.142 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.089	0.822	1.183	0.430	5.525	$2.523 \times 10^5$	
1.26 TeV	$1.259 \times 10^6$	3.116	1.054	1.515	0.547	6.232	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.128	1.182	1.697	0.611	6.618	$3.184 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.171	1.736	2.485	0.884	8.277	$3.993 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.220	2.665	3.799	1.355	11.039	$5.036 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.255	3.612	5.132	1.834	13.833	$5.844 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.342	7.450	10.502	3.831	25.126	$7.959 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.371	9.393	13.208	4.860	30.833	$8.676 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.414	13.272	18.599	6.982	42.267	$9.780 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.461	19.144	26.732	10.243	59.581	$1.097 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.515	28.924	40.262	15.907	88.608	$1.234 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.555	38.762	53.838	21.722	117.877	$1.331 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.651	78.203	108.188	46.153	236.196	$1.566 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.683	97.977	135.397	58.825	295.882	$1.642 \times 10^6$	