

**Table 220: Muons in Polychlorostyrene ( $C_{17}H_{18}C_{12}$ )<sub>n</sub>**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.52518	1.300	81.7	0.07530	3.5441	0.1238	2.9241	3.4659	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	$4.704 \times 10^1$	7.452				7.452	$7.422 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.816				5.816	$1.356 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.544				4.544	$2.537 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.526				3.526	$5.070 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.012				3.012	$8.159 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.258				2.259	$2.397 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.117				2.117	$3.314 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.973				1.973	$5.281 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.890				1.890	$8.400 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.860			0.000	1.860	$1.375 \times 10^2$	
314. MeV	$4.065 \times 10^2$	1.859			0.000	1.860	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.867			0.000	1.867	$1.912 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.940	0.000		0.000	1.941	$4.014 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.973	0.000		0.000	1.974	$5.036 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.027	0.000	0.000	0.001	2.028	$7.033 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.086	0.001	0.000	0.001	2.088	$9.946 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.154	0.001	0.001	0.001	2.157	$1.465 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.201	0.002	0.001	0.002	2.205	$1.923 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.308	0.004	0.004	0.004	2.319	$3.687 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.340	0.005	0.005	0.005	2.356	$4.542 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.387	0.008	0.009	0.007	2.411	$6.219 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.435	0.012	0.014	0.009	2.471	$8.676 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.486	0.020	0.025	0.013	2.545	$1.266 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.521	0.029	0.037	0.018	2.604	$1.654 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.600	0.066	0.089	0.034	2.789	$3.136 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.625	0.085	0.117	0.042	2.870	$3.843 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.661	0.126	0.176	0.058	3.022	$5.201 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.700	0.189	0.269	0.083	3.242	$7.117 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.744	0.299	0.427	0.124	3.593	$1.005 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.774	0.412	0.591	0.166	3.943	$1.270 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.850	0.883	1.272	0.335	5.340	$2.138 \times 10^5$	
910. GeV	$9.104 \times 10^5$	2.864	1.017	1.465	0.382	5.728	<i>Muon critical energy</i>	
1.00 TeV	$1.000 \times 10^6$	2.874	1.126	1.624	0.421	6.045	$2.490 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.911	1.616	2.324	0.597	7.448	$3.085 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.951	2.367	3.397	0.864	9.579	$3.794 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.997	3.627	5.181	1.324	13.129	$4.682 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.030	4.907	6.991	1.791	16.719	$5.356 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.112	10.089	14.275	3.738	31.214	$7.079 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.139	12.708	17.943	4.740	38.530	$7.655 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.179	17.936	25.252	6.806	53.173	$8.535 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.223	25.842	36.274	9.979	75.319	$9.479 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.274	38.999	54.616	15.485	112.376	$1.056 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.311	52.223	73.016	21.136	149.686	$1.133 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.402	105.229	146.673	44.847	300.151	$1.318 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.431	131.796	183.544	57.136	375.907	$1.377 \times 10^6$	