

**Table 218: Muons in Polyacrylonitrile (C<sub>3</sub>H<sub>3</sub>N)<sub>n</sub>**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.52767	1.170	69.6	0.16275	3.1975	0.1504	2.5159	3.2459	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	$4.704 \times 10^1$	7.645				7.645	$7.224 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.961				5.961	$1.321 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.654				4.654	$2.474 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.609				3.609	$4.948 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.081				3.081	$7.966 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.311				2.311	$2.343 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.164				2.164	$3.240 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.014				2.014	$5.165 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.928				1.928	$8.222 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.894			0.000	1.895	$1.347 \times 10^2$	
318. MeV	$4.105 \times 10^2$	1.894			0.000	1.894	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.900			0.000	1.900	$1.874 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.971	0.000		0.000	1.971	$3.942 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.003	0.000		0.000	2.004	$4.948 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.056	0.000		0.001	2.057	$6.917 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.114	0.000	0.000	0.001	2.115	$9.792 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.180	0.001	0.001	0.001	2.183	$1.444 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.226	0.001	0.001	0.002	2.230	$1.897 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.331	0.003	0.003	0.004	2.341	$3.642 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.363	0.004	0.004	0.005	2.376	$4.490 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.409	0.006	0.007	0.007	2.428	$6.155 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.456	0.010	0.011	0.009	2.486	$8.595 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.506	0.016	0.019	0.014	2.555	$1.256 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.541	0.022	0.028	0.018	2.609	$1.643 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.620	0.051	0.068	0.034	2.774	$3.127 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.645	0.066	0.090	0.043	2.845	$3.839 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.682	0.098	0.136	0.059	2.975	$5.214 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.721	0.147	0.208	0.084	3.160	$7.170 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.765	0.233	0.331	0.126	3.454	$1.019 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.796	0.321	0.459	0.168	3.744	$1.297 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.871	0.690	0.994	0.339	4.894	$2.229 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.896	0.881	1.270	0.426	5.473	$2.615 \times 10^5$	
1.12 TeV	$1.120 \times 10^6$	2.908	0.995	1.434	0.479	5.817	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	2.933	1.266	1.820	0.604	6.623	$3.279 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.973	1.857	2.664	0.875	8.369	$4.083 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.020	2.848	4.069	1.340	11.277	$5.109 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.053	3.857	5.494	1.814	14.218	$5.897 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.135	7.943	11.236	3.787	26.102	$7.943 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.162	10.011	14.129	4.804	32.105	$8.632 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.203	14.136	19.892	6.898	44.129	$9.691 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.247	20.378	28.585	10.117	62.328	$1.083 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.298	30.771	43.049	15.706	92.825	$1.214 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.335	41.222	57.560	21.443	123.561	$1.307 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.426	83.116	115.656	45.527	247.726	$1.531 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.456	104.116	144.739	58.015	310.326	$1.603 \times 10^6$	