

## Muons in polyvinylidene fluoride [(CH<sub>2</sub>CHF<sub>2</sub>)<sub>n</sub>]

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.49973	1.760	88.8	0.10316	3.4200	0.1717	2.7375	3.3793	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	$4.704 \times 10^1$	7.014				7.014	$7.892 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.476				5.476	$1.441 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.280				4.280	$2.695 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.323				3.323	$5.384 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.839				2.839	$8.661 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.134				2.134	$2.543 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.002				2.002	$3.513 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.865				1.865	$5.593 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.787				1.787	$8.892 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.758			0.000	1.758	$1.455 \times 10^2$	
313. MeV	$4.055 \times 10^2$	1.758			0.000	1.758	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	1.764			0.000	1.765	$2.023 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.833	0.000		0.000	1.834	$4.247 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.864	0.000		0.000	1.865	$5.329 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.915	0.000		0.001	1.916	$7.443 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.971	0.001	0.000	0.001	1.972	$1.053 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	2.034	0.001	0.001	0.001	2.037	$1.551 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.078	0.001	0.001	0.002	2.082	$2.036 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.178	0.004	0.003	0.004	2.189	$3.904 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.209	0.005	0.005	0.005	2.223	$4.810 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.253	0.007	0.008	0.007	2.275	$6.587 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.298	0.011	0.013	0.009	2.332	$9.191 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.346	0.019	0.023	0.013	2.401	$1.341 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.379	0.026	0.033	0.017	2.456	$1.753 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.455	0.060	0.081	0.034	2.629	$3.324 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.478	0.078	0.106	0.042	2.704	$4.074 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.513	0.114	0.160	0.058	2.845	$5.516 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.550	0.172	0.244	0.083	3.049	$7.552 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.591	0.272	0.388	0.124	3.374	$1.067 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.621	0.375	0.537	0.165	3.698	$1.350 \times 10^5$	
800. GeV	$8.001 \times 10^5$	2.692	0.803	1.159	0.334	4.988	$2.278 \times 10^5$	
932. GeV	$9.317 \times 10^5$	2.708	0.949	1.369	0.390	5.416	<i>Muon critical energy</i>	
1.00 TeV	$1.000 \times 10^6$	2.715	1.025	1.480	0.419	5.640	$2.655 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.751	1.471	2.118	0.595	6.935	$3.293 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.789	2.155	3.097	0.861	8.902	$4.055 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.833	3.303	4.725	1.320	12.181	$5.012 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.864	4.470	6.376	1.786	15.496	$5.738 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.942	9.192	13.026	3.726	28.885	$7.599 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.967	11.580	16.374	4.725	35.646	$8.222 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.006	16.343	23.046	6.783	49.178	$9.173 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.048	23.546	33.109	9.944	69.647	$1.019 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.096	35.540	49.852	15.430	103.919	$1.136 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.131	47.596	66.649	21.059	138.435	$1.219 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.217	95.928	133.895	44.673	277.713	$1.419 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.246	120.155	167.558	56.910	347.868	$1.484 \times 10^6$	