

**Table 232: Muons in Polyvinylchloride (PVC) [CH<sub>2</sub>CHCl]<sub>n</sub>**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.51201	1.300	108.2	0.12438	3.2104	0.1559	2.9415	4.0532	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	$4.704 \times 10^1$	6.998				6.998	$7.925 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.469				5.469	$1.446 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.279				4.279	$2.700 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.326				3.326	$5.388 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.843				2.843	$8.661 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.140				2.140	$2.539 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.009				2.009	$3.506 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.877				1.877	$5.575 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.803				1.803	$8.849 \times 10^1$	
298. MeV	$3.894 \times 10^2$	1.779			0.000	1.780		<i>Minimum ionization</i>
300. MeV	$3.917 \times 10^2$	1.779			0.000	1.780	$1.445 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.790			0.000	1.790	$2.005 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.869	0.000		0.000	1.870	$4.192 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.904	0.000		0.000	1.905	$5.251 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.960	0.001	0.000	0.001	1.961	$7.319 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.021	0.001	0.000	0.001	2.023	$1.033 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	2.090	0.002	0.001	0.001	2.094	$1.518 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.138	0.002	0.002	0.002	2.144	$1.990 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.247	0.005	0.005	0.004	2.262	$3.800 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.280	0.007	0.007	0.005	2.299	$4.677 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.327	0.011	0.012	0.006	2.356	$6.395 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.374	0.017	0.020	0.009	2.420	$8.905 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.425	0.028	0.034	0.013	2.500	$1.297 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.459	0.039	0.050	0.017	2.566	$1.691 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.537	0.089	0.120	0.033	2.779	$3.187 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.561	0.115	0.158	0.041	2.876	$3.894 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.597	0.169	0.237	0.057	3.061	$5.242 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.634	0.254	0.363	0.081	3.333	$7.120 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.677	0.401	0.574	0.122	3.774	$9.937 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.707	0.552	0.794	0.162	4.215	$1.244 \times 10^5$	
697. GeV	$6.971 \times 10^5$	2.765	1.016	1.465	0.285	5.531		<i>Muon critical energy</i>
800. GeV	$8.001 \times 10^5$	2.780	1.180	1.702	0.328	5.990	$2.036 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.804	1.504	2.169	0.412	6.889	$2.347 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.840	2.155	3.100	0.584	8.680	$2.864 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.879	3.154	4.526	0.845	11.405	$3.465 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.924	4.826	6.896	1.294	15.941	$4.204 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.956	6.525	9.297	1.751	20.529	$4.755 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.036	13.391	18.959	3.651	39.037	$6.144 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.062	16.859	23.822	4.629	48.372	$6.604 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.102	23.782	33.514	6.643	67.042	$7.303 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.145	34.247	48.126	9.735	95.252	$8.050 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.194	51.653	72.446	15.097	142.391	$8.904 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.230	69.138	96.838	20.597	189.804	$9.510 \times 10^5$	
80.0 TeV	$8.000 \times 10^7$	3.318	139.238	194.480	43.652	380.688	$1.097 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.347	174.372	243.353	55.592	476.665	$1.144 \times 10^6$	