

**Table 219: Muons in Polycarbonate (Lexan, [OC<sub>6</sub>H<sub>4</sub>C(CH<sub>3</sub>)<sub>2</sub>C<sub>6</sub>H<sub>4</sub>OCO]<sub>n</sub>)**

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.52697	1.200	73.1	0.12860	3.3288	0.1606	2.6225	3.3201	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	$4.704 \times 10^1$	7.586				7.586	$7.283 \times 10^{-1}$		
14.0 MeV	$5.616 \times 10^1$	5.917				5.917	$1.332 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	4.620				4.621	$2.492 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	3.584				3.584	$4.984 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	3.060				3.060	$8.023 \times 10^0$		
80.0 MeV	$1.527 \times 10^2$	2.297				2.297	$2.359 \times 10^1$		
100. MeV	$1.764 \times 10^2$	2.152				2.152	$3.261 \times 10^1$		
140. MeV	$2.218 \times 10^2$	2.004				2.004	$5.196 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.919				1.919	$8.268 \times 10^1$		
300. MeV	$3.917 \times 10^2$	1.886			0.000	1.887	$1.354 \times 10^2$		
318. MeV	$4.105 \times 10^2$	1.886			0.000	1.886	<i>Minimum ionization</i>		
400. MeV	$4.945 \times 10^2$	1.892			0.000	1.892	$1.884 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.963	0.000		0.000	1.964	$3.959 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.996	0.000		0.000	1.997	$4.969 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	2.049	0.000		0.001	2.050	$6.945 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	2.107	0.001	0.000	0.001	2.109	$9.828 \times 10^2$		
3.00 GeV	$3.104 \times 10^3$	2.174	0.001	0.001	0.001	2.177	$1.449 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	2.220	0.001	0.001	0.002	2.224	$1.903 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	2.325	0.003	0.003	0.004	2.335	$3.653 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	2.357	0.004	0.004	0.005	2.370	$4.503 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	2.403	0.006	0.007	0.007	2.423	$6.171 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.450	0.010	0.011	0.009	2.481	$8.617 \times 10^3$		
30.0 GeV	$3.011 \times 10^4$	2.501	0.016	0.020	0.014	2.550	$1.259 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.535	0.023	0.029	0.018	2.605	$1.647 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.615	0.052	0.070	0.034	2.771	$3.133 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.640	0.067	0.092	0.043	2.842	$3.846 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.677	0.099	0.138	0.059	2.973	$5.221 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.715	0.150	0.211	0.084	3.160	$7.178 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.759	0.236	0.336	0.126	3.457	$1.020 \times 10^5$		
400. GeV	$4.001 \times 10^5$	2.790	0.326	0.466	0.168	3.750	$1.298 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.865	0.701	1.009	0.339	4.914	$2.227 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.890	0.895	1.290	0.425	5.500	$2.611 \times 10^5$		
1.10 TeV	$1.104 \times 10^6$	2.901	0.995	1.434	0.472	5.802	<i>Muon critical energy</i>		
1.40 TeV	$1.400 \times 10^6$	2.927	1.285	1.848	0.603	6.664	$3.271 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.967	1.885	2.705	0.874	8.431	$4.070 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	3.014	2.891	4.131	1.339	11.375	$5.087 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	3.047	3.915	5.577	1.812	14.351	$5.869 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	3.129	8.062	11.404	3.784	26.378	$7.894 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	3.155	10.159	14.340	4.799	32.454	$8.576 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	3.197	14.345	20.188	6.892	44.622	$9.623 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	3.241	20.679	29.010	10.108	63.038	$1.075 \times 10^6$		
30.0 TeV	$3.000 \times 10^7$	3.292	31.225	43.689	15.690	93.896	$1.204 \times 10^6$		
40.0 TeV	$4.000 \times 10^7$	3.329	41.828	58.415	21.421	124.993	$1.296 \times 10^6$		
80.0 TeV	$8.000 \times 10^7$	3.419	84.332	117.373	45.476	250.600	$1.518 \times 10^6$		
100. TeV	$1.000 \times 10^8$	3.449	105.635	146.887	57.948	313.919	$1.589 \times 10^6$		