

Table 223: Muons in Polymethylmethacrylate (acrylic, $[\text{CH}_2\text{C}(\text{CH}_3)(\text{COOCH}_3)]_n$)

	$\langle Z/A \rangle$	ρ [g/cm ³]	I [eV]	a	$k = m_s$	x_0	x_1	\bar{C}	δ_0
	0.53937	1.190	74.0	0.11433	3.3836	0.1824	2.6681	3.3297	0.00
T	p [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm ²]		
				[MeV cm ² /g]					
10.0 MeV	4.704×10^1	7.753				7.753	7.128×10^{-1}		
14.0 MeV	5.616×10^1	6.047				6.047	1.303×10^0		
20.0 MeV	6.802×10^1	4.722				4.722	2.439×10^0		
30.0 MeV	8.509×10^1	3.663				3.663	4.877×10^0		
40.0 MeV	1.003×10^2	3.128				3.128	7.850×10^0		
80.0 MeV	1.527×10^2	2.348				2.348	2.308×10^1		
100. MeV	1.764×10^2	2.203				2.203	3.189×10^1		
140. MeV	2.218×10^2	2.051				2.051	5.080×10^1		
200. MeV	2.868×10^2	1.963				1.964	8.082×10^1		
300. MeV	3.917×10^2	1.930			0.000	1.930	1.323×10^2		
318. MeV	4.105×10^2	1.929			0.000	1.930	<i>Minimum ionization</i>		
400. MeV	4.945×10^2	1.936			0.000	1.936	1.841×10^2		
800. MeV	8.995×10^2	2.008	0.000		0.000	2.009	3.870×10^2		
1.00 GeV	1.101×10^3	2.042	0.000		0.000	2.042	4.857×10^2		
1.40 GeV	1.502×10^3	2.096	0.000		0.001	2.097	6.789×10^2		
2.00 GeV	2.103×10^3	2.155	0.001	0.000	0.001	2.157	9.608×10^2		
3.00 GeV	3.104×10^3	2.223	0.001	0.001	0.001	2.226	1.417×10^3		
4.00 GeV	4.104×10^3	2.270	0.001	0.001	0.002	2.275	1.861×10^3		
8.00 GeV	8.105×10^3	2.378	0.003	0.003	0.004	2.388	3.572×10^3		
10.0 GeV	1.011×10^4	2.411	0.004	0.004	0.005	2.424	4.403×10^3		
14.0 GeV	1.411×10^4	2.459	0.006	0.007	0.007	2.479	6.033×10^3		
20.0 GeV	2.011×10^4	2.507	0.010	0.011	0.009	2.537	8.424×10^3		
30.0 GeV	3.011×10^4	2.559	0.016	0.020	0.014	2.609	1.231×10^4		
40.0 GeV	4.011×10^4	2.594	0.023	0.029	0.018	2.665	1.610×10^4		
80.0 GeV	8.011×10^4	2.675	0.053	0.071	0.034	2.834	3.063×10^4		
100. GeV	1.001×10^5	2.701	0.069	0.094	0.043	2.907	3.760×10^4		
140. GeV	1.401×10^5	2.738	0.102	0.141	0.059	3.041	5.105×10^4		
200. GeV	2.001×10^5	2.778	0.153	0.217	0.084	3.232	7.018×10^4		
300. GeV	3.001×10^5	2.823	0.242	0.345	0.126	3.535	9.975×10^4		
400. GeV	4.001×10^5	2.855	0.334	0.478	0.168	3.835	1.269×10^5		
800. GeV	8.001×10^5	2.932	0.718	1.034	0.339	5.023	2.178×10^5		
1.00 TeV	1.000×10^6	2.957	0.917	1.321	0.426	5.621	2.554×10^5		
1.11 TeV	1.107×10^6	2.968	1.023	1.473	0.473	5.937	<i>Muon critical energy</i>		
1.40 TeV	1.400×10^6	2.995	1.317	1.893	0.604	6.809	3.200×10^5		
2.00 TeV	2.000×10^6	3.036	1.932	2.770	0.874	8.612	3.981×10^5		
3.00 TeV	3.000×10^6	3.083	2.963	4.230	1.340	11.617	4.978×10^5		
4.00 TeV	4.000×10^6	3.117	4.012	5.711	1.813	14.655	5.743×10^5		
8.00 TeV	8.000×10^6	3.201	8.263	11.678	3.786	26.928	7.726×10^5		
10.0 TeV	1.000×10^7	3.229	10.413	14.684	4.802	33.128	8.395×10^5		
14.0 TeV	1.400×10^7	3.270	14.705	20.672	6.896	45.544	9.421×10^5		
20.0 TeV	2.000×10^7	3.316	21.198	29.706	10.114	64.334	1.052×10^6		
30.0 TeV	3.000×10^7	3.368	32.010	44.735	15.700	95.814	1.179×10^6		
40.0 TeV	4.000×10^7	3.406	42.882	59.813	21.435	127.537	1.269×10^6		
80.0 TeV	8.000×10^7	3.499	86.470	120.180	45.508	255.658	1.486×10^6		
100. TeV	1.000×10^8	3.529	108.321	150.400	57.990	320.240	1.556×10^6		