

**Muons in seaborgium (Sg)**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
106 (Sg)	[269.12863(5)]	??	1074.0	0.27308	3.0000	0.6309	3.0000	6.5365	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	$4.704 \times 10^1$	3.525				3.525	$1.683 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	2.840				2.840	$2.958 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.281				2.281	$5.338 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	1.817				1.817	$1.031 \times 10^1$		
40.0 MeV	$1.003 \times 10^2$	1.576				1.576	$1.625 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.223				1.223	$4.590 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.162				1.162	$6.272 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.106				1.106	$9.816 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.085				1.085	$1.531 \times 10^2$		
210. MeV	$2.974 \times 10^2$	1.085	0.000			1.085	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.099	0.000		0.000	1.099	$2.449 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.126	0.000		0.000	1.127	$3.347 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.223	0.001		0.000	1.225	$6.743 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.259	0.002		0.000	1.261	$8.351 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.314	0.003		0.000	1.318	$1.145 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.372	0.005	0.000	0.001	1.379	$1.590 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.436	0.009	0.003	0.001	1.450	$2.296 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.480	0.013	0.006	0.001	1.501	$2.973 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.575	0.031	0.024	0.003	1.635	$5.517 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.603	0.042	0.035	0.004	1.685	$6.721 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.643	0.064	0.058	0.005	1.772	$9.035 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.682	0.099	0.097	0.007	1.887	$1.231 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.723	0.163	0.173	0.011	2.071	$1.737 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.750	0.230	0.257	0.014	2.253	$2.200 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.810	0.521	0.629	0.027	2.990	$3.737 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.829	0.676	0.831	0.034	3.370	$4.366 \times 10^4$		
116. GeV	$1.166 \times 10^5$	1.841	0.804	0.998	0.039	3.685	<i>Muon critical energy</i>		
140. GeV	$1.401 \times 10^5$	1.856	0.992	1.245	0.047	4.141	$5.436 \times 10^4$		
200. GeV	$2.001 \times 10^5$	1.885	1.486	1.902	0.067	5.341	$6.709 \times 10^4$		
300. GeV	$3.001 \times 10^5$	1.917	2.328	2.999	0.100	7.346	$8.300 \times 10^4$		
400. GeV	$4.001 \times 10^5$	1.940	3.198	4.137	0.133	9.411	$9.500 \times 10^4$		
800. GeV	$8.001 \times 10^5$	1.996	6.786	8.800	0.269	17.854	$1.254 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.015	8.627	11.186	0.338	22.168	$1.354 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.042	12.313	15.942	0.479	30.778	$1.507 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.072	17.946	23.199	0.692	43.912	$1.669 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.106	27.342	35.258	1.058	65.767	$1.854 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.131	36.856	47.446	1.429	87.864	$1.985 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.192	75.181	96.420	2.966	176.760	$2.300 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.211	94.479	121.033	3.754	221.480	$2.400 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.242	132.970	170.155	5.371	310.740	$2.552 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.275	191.016	244.152	7.848	445.293	$2.713 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.313	287.743	367.240	12.124	669.421	$2.895 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.340	384.810	490.610	16.498	894.260	$3.023 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.407	773.041	984.429	34.749	1794.628	$3.333 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.429	967.270	1231.560	44.170	2245.432	$3.432 \times 10^5$		