

**Table 019: Muons in Potassium**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
19 (K)	39.0983 (1)	0.862	190.0	0.19827	2.9233	0.3851	3.1724	5.6423	0.10
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	$4.704 \times 10^1$	6.123				6.123	$9.134 \times 10^{-1}$		
14.0 MeV	$5.616 \times 10^1$	4.803				4.803	$1.659 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	3.770				3.770	$3.084 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.939				2.939	$6.130 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	2.518				2.518	$9.829 \times 10^0$		
80.0 MeV	$1.527 \times 10^2$	1.903				1.903	$2.867 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.794				1.794	$3.952 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.687				1.687	$6.262 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.633				1.633	$9.891 \times 10^1$		
260. MeV	$3.496 \times 10^2$	1.623			0.000	1.623	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.625			0.000	1.625	$1.604 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.644	0.000		0.000	1.645	$2.216 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.739	0.000		0.000	1.740	$4.579 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.778	0.001		0.000	1.779	$5.716 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.839	0.001	0.000	0.001	1.841	$7.925 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.905	0.001	0.001	0.001	1.909	$1.112 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.980	0.002	0.002	0.001	1.986	$1.625 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	2.032	0.003	0.003	0.002	2.040	$2.122 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	2.147	0.008	0.008	0.004	2.167	$4.017 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	2.182	0.011	0.011	0.004	2.209	$4.931 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	2.231	0.017	0.018	0.006	2.272	$6.715 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.280	0.026	0.030	0.008	2.345	$9.313 \times 10^3$		
30.0 GeV	$3.011 \times 10^4$	2.331	0.042	0.052	0.012	2.439	$1.349 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.366	0.059	0.076	0.016	2.518	$1.753 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.442	0.134	0.183	0.032	2.791	$3.259 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.465	0.174	0.241	0.039	2.920	$3.959 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.499	0.256	0.360	0.055	3.170	$5.273 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.535	0.384	0.549	0.078	3.546	$7.062 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.575	0.604	0.867	0.117	4.163	$9.662 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.604	0.831	1.197	0.156	4.788	$1.190 \times 10^5$		
472. GeV	$4.718 \times 10^5$	2.620	0.997	1.439	0.184	5.241	<i>Muon critical energy</i>		
800. GeV	$8.001 \times 10^5$	2.673	1.771	2.555	0.315	7.315	$1.861 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.696	2.256	3.251	0.396	8.599	$2.113 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.730	3.228	4.641	0.561	11.162	$2.520 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.767	4.719	6.767	0.812	15.065	$2.982 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.810	7.211	10.299	1.243	21.563	$3.534 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.840	9.740	13.874	1.680	28.135	$3.938 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.916	19.954	28.253	3.499	54.622	$4.941 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.941	25.108	35.486	4.434	67.969	$5.268 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.978	35.398	49.914	6.356	94.647	$5.765 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	3.019	50.942	71.658	9.306	134.926	$6.293 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	3.066	76.787	107.836	14.414	202.105	$6.895 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	3.100	102.737	144.112	19.650	269.600	$7.322 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	3.184	206.767	289.333	41.557	540.842	$8.349 \times 10^5$		
100. TeV	$1.000 \times 10^8$	3.212	258.900	362.020	52.890	677.022	$8.678 \times 10^5$		