

## Muons in terbium (Tb)

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
65 (Tb)	158.92535 (2)	8.230	614.0	0.24453	2.6056	0.0947	3.4224	5.9044	0.14
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	4.211				4.212	$1.363 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	3.342				3.342	$2.440 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	2.650				2.650	$4.477 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.085				2.085	$8.786 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	1.796				1.796	$1.399 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.371				1.371	$4.026 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.297				1.297	$5.529 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.225				1.225	$8.715 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.192				1.192	$1.370 \times 10^2$		
239. MeV	$3.285 \times 10^2$	1.188	0.000			1.188	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.193	0.000		0.000	1.194	$2.210 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.212	0.000		0.000	1.213	$3.041 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.297	0.001		0.000	1.298	$6.225 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.330	0.001		0.000	1.332	$7.746 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.383	0.002	0.000	0.001	1.386	$1.069 \times 10^3$		
2.00 GeV	$2.103 \times 10^3$	1.441	0.003	0.001	0.001	1.447	$1.492 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.507	0.006	0.003	0.001	1.517	$2.166 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.552	0.009	0.006	0.002	1.569	$2.813 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.655	0.021	0.020	0.003	1.700	$5.253 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.686	0.028	0.028	0.004	1.746	$6.413 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.731	0.043	0.045	0.005	1.824	$8.653 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	1.775	0.066	0.074	0.007	1.923	$1.185 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	1.822	0.108	0.129	0.011	2.071	$1.686 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	1.853	0.153	0.189	0.015	2.210	$2.153 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	1.921	0.346	0.455	0.028	2.752	$3.771 \times 10^4$		
100. GeV	$1.001 \times 10^5$	1.942	0.448	0.598	0.035	3.024	$4.465 \times 10^4$		
140. GeV	$1.401 \times 10^5$	1.972	0.657	0.893	0.049	3.573	$5.680 \times 10^4$		
169. GeV	$1.690 \times 10^5$	1.988	0.814	1.116	0.059	3.977	<i>Muon critical energy</i>		
200. GeV	$2.001 \times 10^5$	2.002	0.985	1.361	0.070	4.419	$7.188 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.036	1.545	2.141	0.105	5.828	$9.154 \times 10^4$		
400. GeV	$4.001 \times 10^5$	2.061	2.123	2.950	0.140	7.274	$1.069 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.119	4.510	6.265	0.282	13.178	$1.472 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.138	5.735	7.961	0.355	16.191	$1.608 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.167	8.191	11.343	0.502	22.206	$1.819 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.198	11.947	16.504	0.727	31.378	$2.045 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.234	18.216	25.079	1.111	46.641	$2.305 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.260	24.567	33.745	1.501	62.074	$2.490 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.323	50.166	68.576	3.117	124.184	$2.937 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.344	63.063	86.083	3.947	155.439	$3.080 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.376	88.788	121.016	5.649	217.831	$3.297 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.410	127.596	173.638	8.258	311.904	$3.526 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.450	192.201	261.186	12.763	468.601	$3.785 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.478	257.032	348.937	17.372	625.821	$3.969 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.549	516.724	700.186	36.609	1256.069	$4.412 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.572	646.780	875.970	46.540	1571.864	$4.554 \times 10^5$		