

## Muons in magnesium oxide MgO

	$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
	0.49622	3.580	143.8	0.08313	3.5968	0.0575	2.8580	3.6404	0.00
$T$	$p$ [MeV/c]	Ionization	Brems	Pair prod	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
				[MeV cm <sup>2</sup> /g]					
10.0 MeV	$4.704 \times 10^1$	6.521				6.521		$8.532 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	5.104				5.104		$1.554 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	3.999				3.999		$2.897 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.113				3.113		$5.770 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	2.664				2.664		$9.265 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.005				2.005		$2.711 \times 10^1$	
100. MeV	$1.764 \times 10^2$	1.884				1.884		$3.742 \times 10^1$	
140. MeV	$2.218 \times 10^2$	1.762				1.762		$5.948 \times 10^1$	
200. MeV	$2.868 \times 10^2$	1.695				1.695		$9.432 \times 10^1$	
294. MeV	$3.854 \times 10^2$	1.674			0.000	1.674		<i>Minimum ionization</i>	
300. MeV	$3.917 \times 10^2$	1.674			0.000	1.674		$1.539 \times 10^2$	
400. MeV	$4.945 \times 10^2$	1.684			0.000	1.684		$2.135 \times 10^2$	
800. MeV	$8.995 \times 10^2$	1.758	0.000		0.000	1.759		$4.459 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	1.790	0.000		0.000	1.791		$5.585 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	1.842	0.000	0.000	0.001	1.844		$7.784 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	1.899	0.001	0.000	0.001	1.901		$1.099 \times 10^3$	
3.00 GeV	$3.104 \times 10^3$	1.963	0.001	0.001	0.001	1.967		$1.615 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.007	0.002	0.002	0.002	2.013		$2.117 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.108	0.005	0.005	0.004	2.122		$4.047 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.139	0.006	0.007	0.005	2.157		$4.981 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.183	0.010	0.011	0.006	2.210		$6.812 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.228	0.015	0.018	0.009	2.270		$9.489 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.276	0.025	0.031	0.013	2.345		$1.382 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.309	0.035	0.045	0.017	2.406		$1.803 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.384	0.080	0.108	0.033	2.606		$3.397 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.407	0.104	0.143	0.041	2.695		$4.152 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.442	0.153	0.214	0.057	2.866		$5.591 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.478	0.230	0.327	0.081	3.117		$7.597 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.519	0.362	0.517	0.122	3.521		$1.061 \times 10^5$	
400. GeV	$4.001 \times 10^5$	2.549	0.499	0.716	0.162	3.926		$1.330 \times 10^5$	
718. GeV	$7.176 \times 10^5$	2.608	0.949	1.367	0.293	5.217		<i>Muon critical energy</i>	
800. GeV	$8.001 \times 10^5$	2.620	1.068	1.539	0.328	5.555		$2.183 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	2.643	1.361	1.964	0.412	6.380		$2.518 \times 10^5$	
1.40 TeV	$1.400 \times 10^6$	2.678	1.951	2.808	0.584	8.021		$3.076 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	2.716	2.856	4.100	0.845	10.517		$3.728 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	2.759	4.371	6.250	1.295	14.675		$4.529 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	2.790	5.910	8.427	1.752	18.880		$5.129 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	2.867	12.134	17.192	3.653	35.847		$6.641 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	2.893	15.278	21.604	4.632	44.406		$7.141 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	2.931	21.553	30.397	6.646	61.528		$7.903 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	2.973	31.040	43.654	9.739	87.407		$8.717 \times 10^5$	
30.0 TeV	$3.000 \times 10^7$	3.021	46.820	65.720	15.102	130.663		$9.647 \times 10^5$	
40.0 TeV	$4.000 \times 10^7$	3.056	62.672	87.853	20.603	174.183		$1.031 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.141	126.243	176.451	43.656	349.491		$1.190 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.169	158.110	220.798	55.595	437.672		$1.241 \times 10^6$	