

**Muons in Nylon type 11 Rilsan ( $[\text{C}_{11}\text{H}_{21}\text{ON}]_n$ ),  $[(\text{CH}(\text{CH}_2)_{10}\text{NO}]_n$ )**

$\langle Z/A \rangle$	$\rho$ [g/cm <sup>3</sup> ]	$I$ [eV]	$a$	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
0.55649	1.425	61.6	0.14868	3.2576	0.0678	2.4281	2.7514	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	$4.704 \times 10^1$	8.188				8.188	$6.737 \times 10^{-1}$	
14.0 MeV	$5.616 \times 10^1$	6.381				6.381	$1.233 \times 10^0$	
20.0 MeV	$6.802 \times 10^1$	4.979				4.979	$2.310 \times 10^0$	
30.0 MeV	$8.509 \times 10^1$	3.859				3.859	$4.623 \times 10^0$	
40.0 MeV	$1.003 \times 10^2$	3.293				3.293	$7.446 \times 10^0$	
80.0 MeV	$1.527 \times 10^2$	2.453				2.453	$2.195 \times 10^1$	
100. MeV	$1.764 \times 10^2$	2.295				2.295	$3.041 \times 10^1$	
140. MeV	$2.218 \times 10^2$	2.132				2.132	$4.858 \times 10^1$	
200. MeV	$2.868 \times 10^2$	2.037				2.037	$7.748 \times 10^1$	
300. MeV	$3.917 \times 10^2$	1.998			0.000	1.998	$1.272 \times 10^2$	
328. MeV	$4.211 \times 10^2$	1.997			0.000	1.997	<i>Minimum ionization</i>	
400. MeV	$4.945 \times 10^2$	2.001			0.000	2.001	$1.773 \times 10^2$	
800. MeV	$8.995 \times 10^2$	2.070	0.000		0.000	2.071	$3.739 \times 10^2$	
1.00 GeV	$1.101 \times 10^3$	2.103	0.000		0.000	2.103	$4.697 \times 10^2$	
1.40 GeV	$1.502 \times 10^3$	2.156	0.000		0.001	2.157	$6.574 \times 10^2$	
2.00 GeV	$2.103 \times 10^3$	2.215	0.000	0.000	0.001	2.217	$9.316 \times 10^2$	
3.00 GeV	$3.104 \times 10^3$	2.283	0.001	0.001	0.001	2.285	$1.375 \times 10^3$	
4.00 GeV	$4.104 \times 10^3$	2.330	0.001	0.001	0.002	2.334	$1.808 \times 10^3$	
8.00 GeV	$8.105 \times 10^3$	2.438	0.003	0.003	0.004	2.448	$3.477 \times 10^3$	
10.0 GeV	$1.011 \times 10^4$	2.471	0.004	0.004	0.005	2.484	$4.288 \times 10^3$	
14.0 GeV	$1.411 \times 10^4$	2.519	0.006	0.006	0.007	2.539	$5.879 \times 10^3$	
20.0 GeV	$2.011 \times 10^4$	2.568	0.009	0.011	0.009	2.598	$8.214 \times 10^3$	
30.0 GeV	$3.011 \times 10^4$	2.622	0.015	0.019	0.014	2.670	$1.201 \times 10^4$	
40.0 GeV	$4.011 \times 10^4$	2.658	0.022	0.027	0.018	2.725	$1.571 \times 10^4$	
80.0 GeV	$8.011 \times 10^4$	2.742	0.050	0.067	0.035	2.893	$2.993 \times 10^4$	
100. GeV	$1.001 \times 10^5$	2.768	0.064	0.088	0.043	2.964	$3.676 \times 10^4$	
140. GeV	$1.401 \times 10^5$	2.807	0.095	0.132	0.060	3.094	$4.997 \times 10^4$	
200. GeV	$2.001 \times 10^5$	2.848	0.143	0.203	0.085	3.279	$6.880 \times 10^4$	
300. GeV	$3.001 \times 10^5$	2.894	0.227	0.322	0.127	3.570	$9.801 \times 10^4$	
400. GeV	$4.001 \times 10^5$	2.927	0.313	0.447	0.169	3.857	$1.250 \times 10^5$	
800. GeV	$8.001 \times 10^5$	3.007	0.674	0.969	0.341	4.991	$2.159 \times 10^5$	
1.00 TeV	$1.000 \times 10^6$	3.033	0.861	1.239	0.428	5.561	$2.538 \times 10^5$	
1.19 TeV	$1.193 \times 10^6$	3.053	1.041	1.497	0.515	6.107	<i>Muon critical energy</i>	
1.40 TeV	$1.400 \times 10^6$	3.072	1.237	1.776	0.608	6.693	$3.193 \times 10^5$	
2.00 TeV	$2.000 \times 10^6$	3.114	1.815	2.601	0.880	8.411	$3.991 \times 10^5$	
3.00 TeV	$3.000 \times 10^6$	3.163	2.786	3.973	1.349	11.271	$5.015 \times 10^5$	
4.00 TeV	$4.000 \times 10^6$	3.198	3.774	5.366	1.825	14.164	$5.805 \times 10^5$	
8.00 TeV	$8.000 \times 10^6$	3.285	7.778	10.978	3.812	25.853	$7.865 \times 10^5$	
10.0 TeV	$1.000 \times 10^7$	3.313	9.805	13.806	4.835	31.760	$8.562 \times 10^5$	
14.0 TeV	$1.400 \times 10^7$	3.356	13.850	19.438	6.945	43.590	$9.632 \times 10^5$	
20.0 TeV	$2.000 \times 10^7$	3.403	19.973	27.936	10.188	61.500	$1.079 \times 10^6$	
30.0 TeV	$3.000 \times 10^7$	3.457	30.169	42.073	15.819	91.517	$1.211 \times 10^6$	
40.0 TeV	$4.000 \times 10^7$	3.496	40.424	56.257	21.600	121.776	$1.305 \times 10^6$	
80.0 TeV	$8.000 \times 10^7$	3.592	81.538	113.042	45.878	244.050	$1.533 \times 10^6$	
100. TeV	$1.000 \times 10^8$	3.623	102.150	141.470	58.469	305.712	$1.606 \times 10^6$	