## Table 209: Muons in Nylon (type 6, 6/6) $[CH(CH_2)_5NO]_n$

| $\langle Z/A \rangle$ | $\rho$ [g/cm$^3$] | $I$ [eV] | $a$ | $k = m_s$ | $x_0$ | $x_1$ | $\overline{C}$ | $\delta_0$ |
|---|---|---|---|---|---|---|---|---|
| 0.54790 | 1.180 | 63.9 | 0.11818 | 3.3826 | 0.1261 | 2.5759 | 3.0289 | 0.00 |

| $T$ | $p$ [MeV/$c$] | Ionization | Brems | Pair prod | Photonucl | Total | CSDA range [g/cm$^2$] |
|---|---|---|---|---|---|---|---|
| | | [MeV cm$^2$/g] | | | | | |
| 10.0 MeV | $4.704 \times 10^1$ | 8.024 | | | | 8.025 | $6.877 \times 10^{-1}$ |
| 14.0 MeV | $5.616 \times 10^1$ | 6.255 | | | | 6.255 | $1.258 \times 10^0$ |
| 20.0 MeV | $6.802 \times 10^1$ | 4.881 | | | | 4.881 | $2.357 \times 10^0$ |
| 30.0 MeV | $8.509 \times 10^1$ | 3.784 | | | | 3.784 | $4.716 \times 10^0$ |
| 40.0 MeV | $1.003 \times 10^2$ | 3.229 | | | | 3.230 | $7.596 \times 10^0$ |
| 80.0 MeV | $1.527 \times 10^2$ | 2.416 | | | | 2.417 | $2.236 \times 10^1$ |
| 100. MeV | $1.764 \times 10^2$ | 2.262 | | | | 2.262 | $3.094 \times 10^1$ |
| 140. MeV | $2.218 \times 10^2$ | 2.103 | | | | 2.103 | $4.937 \times 10^1$ |
| 200. MeV | $2.868 \times 10^2$ | 2.011 | | | | 2.011 | $7.865 \times 10^1$ |
| 300. MeV | $3.917 \times 10^2$ | 1.974 | | | 0.000 | 1.974 | $1.290 \times 10^2$ |
| 328. MeV | $4.201 \times 10^2$ | 1.973 | | | 0.000 | 1.973 | *Minimum ionization* |
| 400. MeV | $4.945 \times 10^2$ | 1.978 | | | 0.000 | 1.978 | $1.796 \times 10^2$ |
| 800. MeV | $8.995 \times 10^2$ | 2.048 | 0.000 | | 0.000 | 2.049 | $3.784 \times 10^2$ |
| 1.00 GeV | $1.101 \times 10^3$ | 2.081 | 0.000 | | 0.000 | 2.082 | $4.752 \times 10^2$ |
| 1.40 GeV | $1.502 \times 10^3$ | 2.135 | 0.000 | | 0.001 | 2.136 | $6.648 \times 10^2$ |
| 2.00 GeV | $2.103 \times 10^3$ | 2.194 | 0.000 | 0.000 | 0.001 | 2.196 | $9.417 \times 10^2$ |
| 3.00 GeV | $3.104 \times 10^3$ | 2.261 | 0.001 | 0.001 | 0.001 | 2.264 | $1.390 \times 10^3$ |
| 4.00 GeV | $4.104 \times 10^3$ | 2.308 | 0.001 | 0.001 | 0.002 | 2.313 | $1.826 \times 10^3$ |
| 8.00 GeV | $8.105 \times 10^3$ | 2.417 | 0.003 | 0.003 | 0.004 | 2.427 | $3.510 \times 10^3$ |
| 10.0 GeV | $1.011 \times 10^4$ | 2.449 | 0.004 | 0.004 | 0.005 | 2.463 | $4.328 \times 10^3$ |
| 14.0 GeV | $1.411 \times 10^4$ | 2.497 | 0.006 | 0.007 | 0.007 | 2.517 | $5.934 \times 10^3$ |
| 20.0 GeV | $2.011 \times 10^4$ | 2.546 | 0.010 | 0.011 | 0.009 | 2.576 | $8.288 \times 10^3$ |
| 30.0 GeV | $3.011 \times 10^4$ | 2.598 | 0.016 | 0.019 | 0.014 | 2.647 | $1.212 \times 10^4$ |
| 40.0 GeV | $4.011 \times 10^4$ | 2.634 | 0.022 | 0.028 | 0.018 | 2.703 | $1.585 \times 10^4$ |
| 80.0 GeV | $8.011 \times 10^4$ | 2.717 | 0.051 | 0.069 | 0.035 | 2.871 | $3.019 \times 10^4$ |
| 100. GeV | $1.001 \times 10^5$ | 2.743 | 0.066 | 0.091 | 0.043 | 2.943 | $3.706 \times 10^4$ |
| 140. GeV | $1.401 \times 10^5$ | 2.781 | 0.098 | 0.136 | 0.059 | 3.075 | $5.036 \times 10^4$ |
| 200. GeV | $2.001 \times 10^5$ | 2.821 | 0.148 | 0.209 | 0.084 | 3.262 | $6.930 \times 10^4$ |
| 300. GeV | $3.001 \times 10^5$ | 2.867 | 0.233 | 0.332 | 0.126 | 3.558 | $9.863 \times 10^4$ |
| 400. GeV | $4.001 \times 10^5$ | 2.899 | 0.322 | 0.460 | 0.168 | 3.850 | $1.256 \times 10^5$ |
| 800. GeV | $8.001 \times 10^5$ | 2.977 | 0.693 | 0.996 | 0.340 | 5.007 | $2.165 \times 10^5$ |
| 1.00 TeV | $1.000 \times 10^6$ | 3.003 | 0.884 | 1.274 | 0.427 | 5.588 | $2.543 \times 10^5$ |
| 1.16 TeV | $1.157 \times 10^6$ | 3.020 | 1.034 | 1.488 | 0.497 | 6.040 | *Muon critical energy* |
| 1.40 TeV | $1.400 \times 10^6$ | 3.042 | 1.270 | 1.826 | 0.606 | 6.744 | $3.193 \times 10^5$ |
| 2.00 TeV | $2.000 \times 10^6$ | 3.083 | 1.864 | 2.672 | 0.877 | 8.498 | $3.985 \times 10^5$ |
| 3.00 TeV | $3.000 \times 10^6$ | 3.131 | 2.860 | 4.082 | 1.345 | 11.418 | $4.996 \times 10^5$ |
| 4.00 TeV | $4.000 \times 10^6$ | 3.166 | 3.874 | 5.512 | 1.820 | 14.372 | $5.775 \times 10^5$ |
| 8.00 TeV | $8.000 \times 10^6$ | 3.251 | 7.982 | 11.273 | 3.800 | 26.306 | $7.802 \times 10^5$ |
| 10.0 TeV | $1.000 \times 10^7$ | 3.279 | 10.061 | 14.176 | 4.820 | 32.336 | $8.487 \times 10^5$ |
| 14.0 TeV | $1.400 \times 10^7$ | 3.322 | 14.209 | 19.959 | 6.922 | 44.412 | $9.538 \times 10^5$ |
| 20.0 TeV | $2.000 \times 10^7$ | 3.368 | 20.487 | 28.682 | 10.153 | 62.690 | $1.067 \times 10^6$ |
| 30.0 TeV | $3.000 \times 10^7$ | 3.421 | 30.941 | 43.195 | 15.764 | 93.320 | $1.197 \times 10^6$ |
| 40.0 TeV | $4.000 \times 10^7$ | 3.459 | 41.454 | 57.756 | 21.524 | 124.192 | $1.290 \times 10^6$ |
| 80.0 TeV | $8.000 \times 10^7$ | 3.553 | 83.604 | 116.050 | 45.708 | 248.916 | $1.513 \times 10^6$ |
| 100. TeV | $1.000 \times 10^8$ | 3.585 | 104.736 | 145.233 | 58.248 | 311.801 | $1.584 \times 10^6$ |