The effectiveness of a shield depends on the percent coverage (K) of the braid.

K can be calculated as follows:

\[
K = (2F - F^2) \times 100\%
\]

for

\[
F = \frac{N \cdot d \cdot P}{\sin \alpha}
\]

and

\[
\tan \alpha = \frac{2\pi \cdot (D + 2d) \cdot P}{C_N}
\]

where:

- \(N\) = number of strand end per carrier
- \(D\) = strand diameter in inches
- \(P\) = picks per inch
- \(\alpha\) = braid angel [between any stand and cable axis]
- \(D\) = diameter under shield in inches
- \(C_N\) = number of carrier

Typical values of K (percent coverage):

<table>
<thead>
<tr>
<th>(K)</th>
<th>(F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>0.776</td>
</tr>
<tr>
<td>90</td>
<td>0.684</td>
</tr>
<tr>
<td>85</td>
<td>0.613</td>
</tr>
<tr>
<td>80</td>
<td>0.553</td>
</tr>
<tr>
<td>75</td>
<td>0.500</td>
</tr>
</tbody>
</table>

The foil shield is generally a polyester/aluminium tape applied longitudinally or spiral wrapped around the core with an overlap. The aluminium layer facing wards and tinned copper drain wire underneath, the size of which is generally equal to the conductor size or 2 AWG size smaller.

The dc resistance [\(R\)] for a braid shield can be calculated as follows:

\[
R = \frac{R_o}{N \cdot C_N \cdot \cos \alpha} \text{ Ohms per unit length}
\]

where

- \(R_o\) = dc resistance of a single end in Ohms per unit length.