

**Insulated Panels**  
Standing Seam Systems

Protected by



# RD 106/750

## Structural Deck

### Product Data Sheet



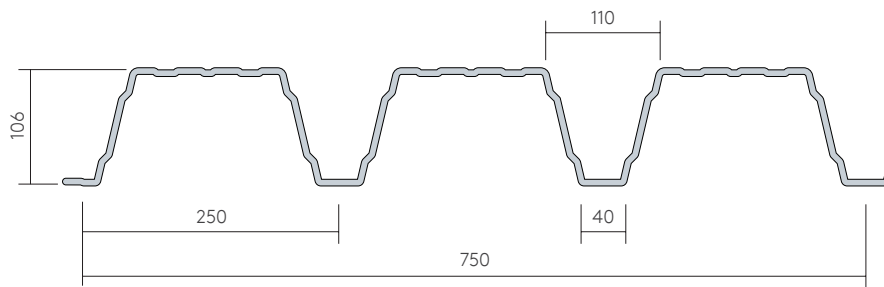
# Structural Deck – 106/750

## Technical Data

**RD 106/750 structural deck offers greater spanning capabilities than traditional liner systems.**

Using a decking system as the primary covering of the roof allows designers to span greater distances between fixing centres and carry greater roof loads.

The unique profile design affords simplistic installation in single, double or indeed multiple span applications.

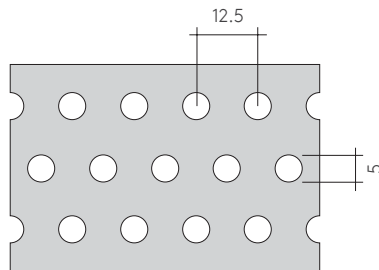


### Product Specification

|                     |  |
|---------------------|--|
| Materials:          | Steel: S350GD with either a Z275 galvanised (ASTM A653) or AZ150 AluZinc (ASTM A792) coating           |
| Coatings:           | Kingspan Polyester, Colorcoat HPS 200 Ultra  |
| Lengths:            | 1.5 m to 12 m  |
| Thickness:          | See table  |
| Fire Performance:   | Kingspan sheets in either steel and aluminium carries a spread of flame and smoke index rating of zero |
| Product Tolerances: | Length: +/-7 mm (0 – 3,500 mm) / 0.5 mm for each metre<br>Width: +/-2 mm<br>Edge squareness: +/-3 mm   |
| Curving:            | N/A  |
| Perforation:        | The below perforation option is available  |

### Dimensions and Weight

|                                     |      |       |       |
|-------------------------------------|------|-------|-------|
| Substrate Thickness (mm)            | 0.75 | 0.88  | 1.00  |
| Weight (kg/m <sup>2</sup> ) – Steel | 9.81 | 11.51 | 13.08 |



## Load Span – Structural Deck RD 106/750

Steel at 350 MPa Yield Strength – Imposed Load (KN/m<sup>2</sup>)

| Profile Thickness (mm) | Span (mm) | Single |       |       |       | Double |       |       |       | Multiple |       |       |       |
|------------------------|-----------|--------|-------|-------|-------|--------|-------|-------|-------|----------|-------|-------|-------|
|                        |           | L/150  | L/200 | L/250 | L/300 | L/150  | L/200 | L/250 | L/300 | L/150    | L/200 | L/250 | L/300 |
| 0.75                   | 4.40      | 2.12   | 1.61  | 1.28  | 1.07  | 2.12   | 2.12  | 2.12  | 2.12  | 2.36     | 2.36  | 2.36  | 2.06  |
|                        | 4.60      | 1.87   | 1.40  | 1.12  | -     | 1.94   | 1.94  | 1.94  | 1.94  | 2.19     | 2.19  | 2.16  | 1.80  |
|                        | 4.80      | 1.65   | 1.24  | -     | -     | 1.78   | 1.78  | 1.78  | 1.78  | 2.04     | 2.04  | 1.90  | 1.58  |
|                        | 5.00      | 1.46   | 1.09  | -     | -     | 1.64   | 1.64  | 1.64  | 1.64  | 1.90     | 1.90  | 1.68  | 1.40  |
|                        | 5.20      | 1.30   | -     | -     | -     | 1.52   | 1.52  | 1.52  | 1.52  | 1.77     | 1.77  | 1.50  | 1.25  |
|                        | 5.40      | 1.16   | -     | -     | -     | 1.41   | 1.41  | 1.41  | 1.41  | 1.66     | 1.66  | 1.34  | 1.11  |
|                        | 5.60      | 1.04   | -     | -     | -     | 1.31   | 1.31  | 1.31  | 1.27  | 1.56     | 1.50  | 1.20  | 1.00  |
|                        | 5.80      | -      | -     | -     | -     | 1.22   | 1.22  | 1.22  | 1.14  | 1.47     | 1.35  | 1.08  | -     |
|                        | 6.00      | -      | -     | -     | -     | 1.14   | 1.14  | 1.14  | 1.03  | 1.38     | 1.22  | -     | -     |
|                        | 6.20      | -      | -     | -     | -     | 1.07   | 1.07  | 1.07  | -     | 1.30     | 1.10  | -     | -     |
|                        | 6.40      | -      | -     | -     | -     | 1.00   | 1.00  | 1.00  | -     | 1.23     | 1.00  | -     | -     |
|                        | 0.88      | 4.40   | 2.57  | 1.93  | 1.54  | 1.29   | 2.64  | 2.64  | 2.64  | 2.64     | 3.03  | 3.03  | 2.97  |
| 4.60                   |           | 2.25   | 1.69  | 1.35  | 1.12  | 2.42   | 2.42  | 2.42  | 2.42  | 2.80     | 2.80  | 2.60  | 2.16  |
| 4.80                   |           | 1.98   | 1.49  | 1.19  | -     | 2.22   | 2.22  | 2.22  | 2.22  | 2.60     | 2.60  | 2.28  | 1.90  |
| 5.00                   |           | 1.75   | 1.31  | 1.05  | -     | 2.05   | 2.05  | 2.05  | 2.05  | 2.42     | 2.42  | 2.02  | 1.68  |
| 5.20                   |           | 1.56   | 1.17  | -     | -     | 1.89   | 1.89  | 1.89  | 1.89  | 2.26     | 2.25  | 1.80  | 1.50  |
| 5.40                   |           | 1.39   | 1.04  | -     | -     | 1.76   | 1.76  | 1.76  | 1.70  | 2.12     | 2.01  | 1.60  | 1.34  |
| 5.60                   |           | 1.25   | -     | -     | -     | 1.63   | 1.63  | 1.63  | 1.52  | 1.98     | 1.80  | 1.44  | 1.20  |
| 5.80                   |           | 1.12   | -     | -     | -     | 1.52   | 1.52  | 1.52  | 1.37  | 1.86     | 1.62  | 1.30  | 1.08  |
| 6.00                   |           | 1.01   | -     | -     | -     | 1.42   | 1.42  | 1.42  | 1.24  | 1.75     | 1.46  | 1.17  | -     |
| 6.20                   |           | -      | -     | -     | -     | 1.33   | 1.33  | 1.33  | 1.12  | 1.65     | 1.33  | 1.06  | -     |
| 6.40                   |           | -      | -     | -     | -     | 1.25   | 1.25  | 1.22  | 1.02  | 1.56     | 1.20  | -     | -     |
| 6.60                   |           | -      | -     | -     | -     | 1.18   | 1.18  | 1.11  | -     | 1.46     | 1.10  | -     | -     |
| 6.80                   | -         | -      | -     | -     | 1.11  | 1.11   | 1.02  | -     | 1.34  | 1.00     | -     | -     |       |
| 7.00                   | -         | -      | -     | -     | 1.04  | 1.04   | -     | -     | 1.23  | -        | -     | -     |       |
| 1.00                   | 4.40      | 2.98   | 2.23  | 1.79  | 1.49  | 3.13   | 3.13  | 3.13  | 3.13  | 3.67     | 3.67  | 3.43  | 2.86  |
|                        | 4.60      | 2.60   | 1.95  | 1.56  | 1.30  | 2.86   | 2.86  | 2.86  | 2.86  | 3.39     | 3.39  | 3.00  | 2.50  |
|                        | 4.80      | 2.29   | 1.72  | 1.38  | 1.15  | 2.63   | 2.63  | 2.63  | 2.63  | 3.14     | 3.14  | 2.64  | 2.20  |
|                        | 5.00      | 2.03   | 1.52  | 1.22  | 1.01  | 2.42   | 2.42  | 2.42  | 2.42  | 2.92     | 2.92  | 2.34  | 1.95  |
|                        | 5.20      | 1.80   | 1.35  | 1.08  | -     | 2.24   | 2.24  | 2.24  | 2.20  | 2.73     | 2.60  | 2.08  | 1.73  |
|                        | 5.40      | 1.61   | 1.21  | -     | -     | 2.08   | 2.08  | 2.08  | 1.96  | 2.55     | 2.32  | 1.86  | 1.55  |
|                        | 5.60      | 1.44   | 1.08  | -     | -     | 1.93   | 1.93  | 1.93  | 1.76  | 2.39     | 2.08  | 1.67  | 1.39  |
|                        | 5.80      | 1.30   | -     | -     | -     | 1.80   | 1.80  | 1.80  | 1.58  | 2.23     | 1.87  | 1.50  | 1.25  |
|                        | 6.00      | 1.17   | -     | -     | -     | 1.68   | 1.68  | 1.68  | 1.43  | 2.09     | 1.69  | 1.35  | 1.13  |
|                        | 6.20      | 1.06   | -     | -     | -     | 1.57   | 1.57  | 1.56  | 1.30  | 1.95     | 1.53  | 1.23  | 1.02  |
|                        | 6.40      | -      | -     | -     | -     | 1.48   | 1.48  | 1.42  | 1.18  | 1.83     | 1.39  | 1.12  | -     |
|                        | 6.60      | -      | -     | -     | -     | 1.39   | 1.39  | 1.29  | 1.08  | 1.70     | 1.27  | 1.02  | -     |
| 6.80                   | -         | -      | -     | -     | 1.31  | 1.31   | 1.18  | -     | 1.55  | 1.16     | -     | -     |       |
| 7.00                   | -         | -      | -     | -     | 1.24  | 1.24   | 1.08  | -     | 1.42  | 1.07     | -     | -     |       |

Working load UDL (kN/m<sup>2</sup>).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

# Structural Deck – 106/750

## Technical Data

### Load Span – Structural Deck RD 106/750

Steel at 350 MPa Yield Strength – Wind Suction Load (KN/m<sup>2</sup>)

| Profile Thickness (mm) | Span (mm) | Single |       |       |       | Double |       |       |       | Multiple |       |       |       |
|------------------------|-----------|--------|-------|-------|-------|--------|-------|-------|-------|----------|-------|-------|-------|
|                        |           | L/150  | L/200 | L/250 | L/300 | L/150  | L/200 | L/250 | L/300 | L/150    | L/200 | L/250 | L/300 |
| 0.75                   | 4.40      | 2.14   | 1.66  | 1.33  | 1.11  | 2.12   | 2.12  | 2.12  | 2.12  | 2.65     | 2.65  | 2.55  | 2.13  |
|                        | 4.60      | 1.94   | 1.45  | 1.16  | -     | 1.94   | 1.94  | 1.94  | 1.94  | 2.43     | 2.43  | 2.23  | 1.86  |
|                        | 4.80      | 1.70   | 1.28  | 1.00  | -     | 1.78   | 1.78  | 1.78  | 1.78  | 2.23     | 2.23  | 1.97  | 1.64  |
|                        | 5.00      | 1.51   | 1.13  | -     | -     | 1.64   | 1.64  | 1.64  | 1.64  | 2.05     | 2.05  | 1.74  | 1.45  |
|                        | 5.20      | 1.31   | 1.00  | -     | -     | 1.52   | 1.52  | 1.52  | 1.52  | 1.90     | 1.90  | 1.55  | 1.29  |
|                        | 5.40      | 1.20   | -     | -     | -     | 1.41   | 1.41  | 1.41  | 1.41  | 1.76     | 1.73  | 1.38  | 1.15  |
|                        | 5.60      | 1.07   | -     | -     | -     | 1.31   | 1.31  | 1.31  | 1.31  | 1.64     | 1.55  | 1.24  | 1.00  |
|                        | 5.80      | -      | -     | -     | -     | 1.22   | 1.22  | 1.22  | 1.18  | 1.53     | 1.39  | 1.11  | -     |
|                        | 6.00      | -      | -     | -     | -     | 1.14   | 1.14  | 1.14  | 1.06  | 1.43     | 1.26  | 1.00  | -     |
|                        | 6.20      | -      | -     | -     | -     | 1.07   | 1.07  | 1.07  | -     | 1.34     | 1.14  | -     | -     |
|                        | 6.40      | -      | -     | -     | -     | 1.00   | 1.00  | 1.00  | -     | 1.25     | 1.04  | -     | -     |
|                        | 0.88      | 4.40   | 2.64  | 2.01  | 1.61  | 1.34   | 2.64  | 2.64  | 2.64  | 2.64     | 3.31  | 3.31  | 3.09  |
| 4.60                   |           | 2.35   | 1.76  | 1.41  | 1.17  | 2.42   | 2.42  | 2.42  | 2.42  | 3.02     | 3.02  | 2.71  | 2.26  |
| 4.80                   |           | 2.06   | 1.55  | 1.24  | 1.00  | 2.22   | 2.22  | 2.22  | 2.22  | 2.78     | 2.78  | 2.38  | 1.99  |
| 5.00                   |           | 1.83   | 1.37  | 1.10  | -     | 2.05   | 2.05  | 2.05  | 2.05  | 2.56     | 2.56  | 2.11  | 1.76  |
| 5.20                   |           | 1.62   | 1.22  | -     | -     | 1.89   | 1.89  | 1.89  | 1.89  | 2.37     | 2.34  | 1.87  | 1.56  |
| 5.40                   |           | 1.45   | 1.09  | -     | -     | 1.76   | 1.76  | 1.76  | 1.76  | 2.19     | 2.09  | 1.67  | 1.39  |
| 5.60                   |           | 1.30   | -     | -     | -     | 1.63   | 1.63  | 1.63  | 1.59  | 2.04     | 1.88  | 1.50  | 1.25  |
| 5.80                   |           | 1.17   | -     | -     | -     | 1.52   | 1.52  | 1.52  | 1.43  | 1.90     | 1.69  | 1.35  | 1.13  |
| 6.00                   |           | 1.06   | -     | -     | -     | 1.42   | 1.42  | 1.42  | 1.29  | 1.78     | 1.52  | 1.22  | 1.00  |
| 6.20                   |           | -      | -     | -     | -     | 1.33   | 1.33  | 1.33  | 1.17  | 1.66     | 1.38  | 1.11  | -     |
| 6.40                   |           | -      | -     | -     | -     | 1.25   | 1.25  | 1.25  | 1.06  | 1.56     | 1.26  | 1.00  | -     |
| 6.60                   |           | -      | -     | -     | -     | 1.18   | 1.18  | 1.16  | -     | 1.47     | 1.15  | -     | -     |
| 6.80                   | -         | -      | -     | -     | 1.11  | 1.11   | 1.06  | -     | 1.38  | 1.05     | -     | -     |       |
| 7.00                   | -         | -      | -     | -     | 1.04  | 1.04   | -     | -     | 1.28  | -        | -     | -     |       |
| 1.00                   | 4.40      | 3.06   | 2.30  | 1.84  | 1.53  | 3.13   | 3.13  | 3.13  | 3.13  | 3.91     | 3.91  | 3.53  | 2.94  |
|                        | 4.60      | 2.68   | 2.01  | 1.61  | 1.34  | 2.86   | 2.86  | 2.86  | 2.86  | 3.58     | 3.58  | 3.09  | 2.58  |
|                        | 4.80      | 2.36   | 1.77  | 1.42  | 1.18  | 2.63   | 2.63  | 2.63  | 2.63  | 3.28     | 3.28  | 2.72  | 2.27  |
|                        | 5.00      | 2.09   | 1.57  | 1.25  | 1.04  | 2.42   | 2.42  | 2.42  | 2.42  | 3.03     | 3.01  | 2.41  | 2.01  |
|                        | 5.20      | 1.86   | 1.39  | 1.11  | -     | 2.24   | 2.24  | 2.24  | 2.21  | 2.80     | 2.68  | 2.14  | 1.78  |
|                        | 5.40      | 1.66   | 1.24  | -     | -     | 2.08   | 2.08  | 2.08  | 2.02  | 2.59     | 2.39  | 1.91  | 1.59  |
|                        | 5.60      | 1.49   | 1.11  | -     | -     | 1.93   | 1.93  | 1.93  | 1.81  | 2.41     | 2.14  | 1.71  | 1.43  |
|                        | 5.80      | 1.34   | 1.00  | -     | -     | 1.80   | 1.80  | 1.80  | 1.63  | 2.25     | 1.93  | 1.54  | 1.29  |
|                        | 6.00      | 1.21   | -     | -     | -     | 1.68   | 1.68  | 1.68  | 1.47  | 2.10     | 1.74  | 1.39  | 1.16  |
|                        | 6.20      | 1.09   | -     | -     | -     | 1.57   | 1.57  | 1.57  | 1.33  | 1.97     | 1.58  | 1.26  | 1.05  |
|                        | 6.40      | 1.00   | -     | -     | -     | 1.48   | 1.48  | 1.46  | 1.21  | 1.85     | 1.44  | 1.15  | -     |
|                        | 6.60      | -      | -     | -     | -     | 1.39   | 1.39  | 1.33  | 1.11  | 1.74     | 1.31  | 1.05  | -     |
| 6.80                   | -         | -      | -     | -     | 1.31  | 1.31   | 1.21  | 1.00  | 1.60  | 1.20     | -     | -     |       |
| 7.00                   | -         | -      | -     | -     | 1.24  | 1.24   | 1.11  | -     | 1.46  | 1.10     | -     | -     |       |

Working load UDL (kN/m<sup>2</sup>).

The load shown is the ultimate load divided by 1.5.

Tests / calculations EN 1990, EN 1991 1-6, EN 1993 1-3, EN 1993 1-5 (calculations are to Eurocode, however additional checks such as fixings are required).

Deck self weight has not been allowed for, so has to be included in applied loads.

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