

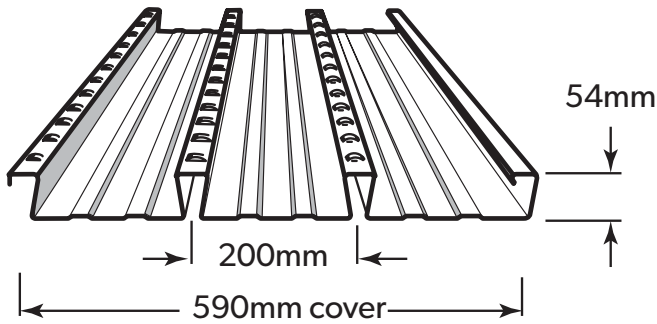
# BONDEK<sup>®</sup> STRUCTURAL STEEL DECK

USER GUIDE FOR CONCRETE  
CONSTRUCTION PROFESSIONALS

# LYSAGHT



# BONDEK® STRUCTURAL STEEL DECK USER GUIDE



## USING LYSAGHT® BONDEK® STRUCTURAL STEEL DECK

BONDEK® Structural Steel Decking is a highly efficient, versatile and robust formwork, reinforcement and ceiling system for concrete slabs. It is a profiled steel sheeting widely accepted by the building and construction industry to offer efficiency and speed of construction. It has re-entrant ribs into the concrete slab at approximate 200mm centres and its depth is 54mm. It is available in a Base Metal Thicknesses (BMT) 0.6, 0.75, 0.9 and 1.0mm.

This manual is to be used in conjunction with the BONDEK® Structural Steel Decking Design and Construction Manual - and forms a practical construction handbook, rather than a design manual.

Designs can be adopted from the BONDEK® Structural Steel Decking Design and Construction Manual, in conjunction with a consulting structural engineer.

Topics in this guide include construction and formwork tables.

Our newest release of supporting software and the Design and Construction Manual for BONDEK® Structural Steel Decking incorporates Lysaght's latest research and development work. Improved design and testing methods have again pushed BONDEK® Structural Steel Decking to the forefront. New formwork tables are optimised for steel frame construction but are also suitable for concrete frame construction and masonry walls.

Please consult formwork General Notes when using concrete framed or masonry wall construction and refer to the Design and Construction Manual.

BONDEK® steel decking permits installation of suspended services and ceilings without drilling into the concrete slab. A reliable interlocking mechanism provides vertical lapping for faster installation. BONDEK® steel deck has a durable galvanised coating.

## DESIGN ADVANTAGES INCLUDE:

- Excellent spanning capacities for greater strength and less deflection
- Acts as permanent formwork with minimal propping and no stripping of formwork face is required
- Fast and easy to install (590mm wide) with less handling required
- Works as reinforcement with composite slab saving on concrete and reinforcement costs
- Ribs at 200mm centres creating a safe working platform with slip resistant embossments on the ribs
- Advanced design for fire resistance
- New BONDEK® design software gives added flexibility and ease of design
- Backed by a BlueScope Steel warranty
- Nationwide technical support

## MATERIAL SPECIFICATIONS

| Thickness<br>mm | Mass              |      | Yield<br>Strength<br>MPa | Coverage<br>m <sup>2</sup> /t |
|-----------------|-------------------|------|--------------------------|-------------------------------|
|                 | kg/m <sup>2</sup> | kg/m |                          |                               |
| 0.60            | 8.52              | 5.03 | 550                      | 117.31                        |
| 0.75            | 10.50             | 6.19 | 550                      | 95.24                         |
| 0.90            | 12.48             | 7.36 | 550                      | 80.16                         |
| 1.00            | 13.79             | 8.14 | 550                      | 72.50                         |

BONDEK® profiled steel decking is roll-formed from hot dipped, zinc-coated, hi-tensile steel strip, in Base Metal Thicknesses (BMT) of 0.60, 0.75, 0.90 and 1.0mm. The steel strip conforms to AS 1397 grade G550, Z350.

0.9mm thickness is available for projects by special order.

Pre-painted BRITEWHITE® soffit is also available on enquiry.

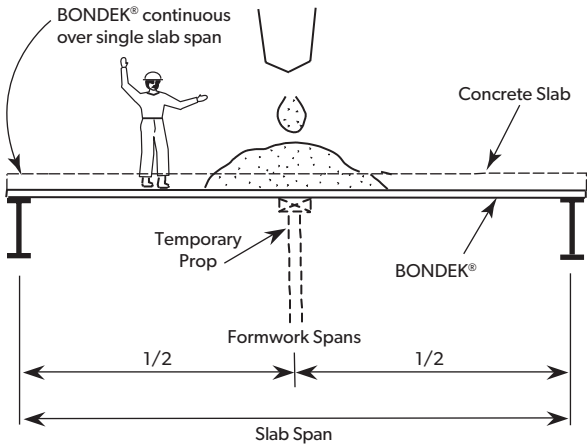
## CERTIFICATION OF FORMWORK

LYSAGHT® certifies that the information contained within this Specification complies with Section B of the Building Code of Australia and with the relevant Australian Standards.

This specification has been based on the exclusive use of BONDEK® manufactured by LYSAGHT®.

**Figure 1**

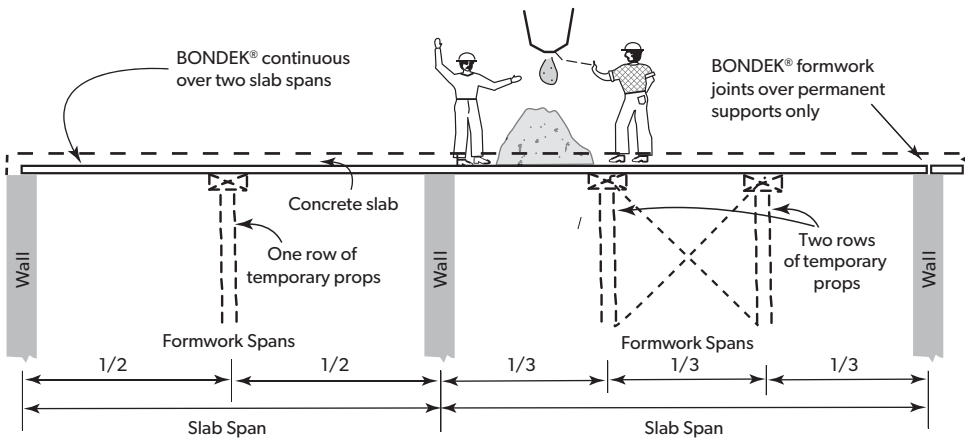
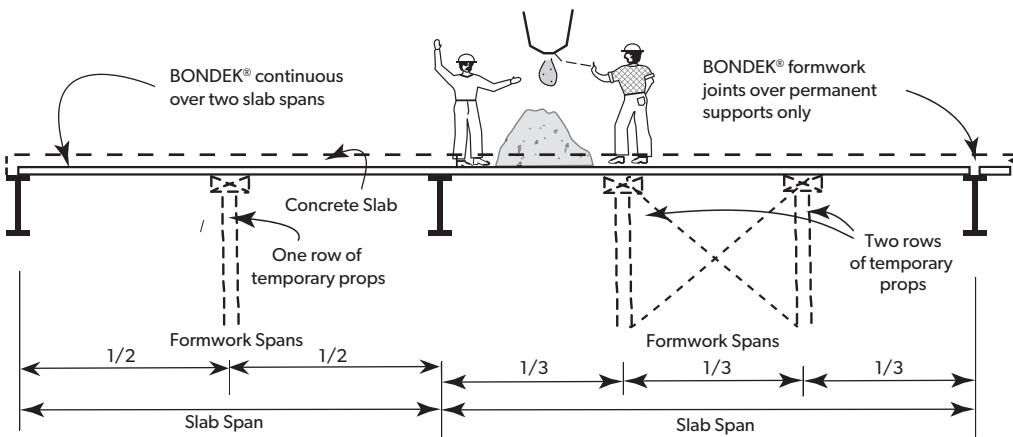
BONDEK® sheets continuous over single slab span.



Figures 1, 2 and 3 are simply to illustrate typical propping configuration within a slab span to achieve equal spans of the BONDEK® during the formwork stage.

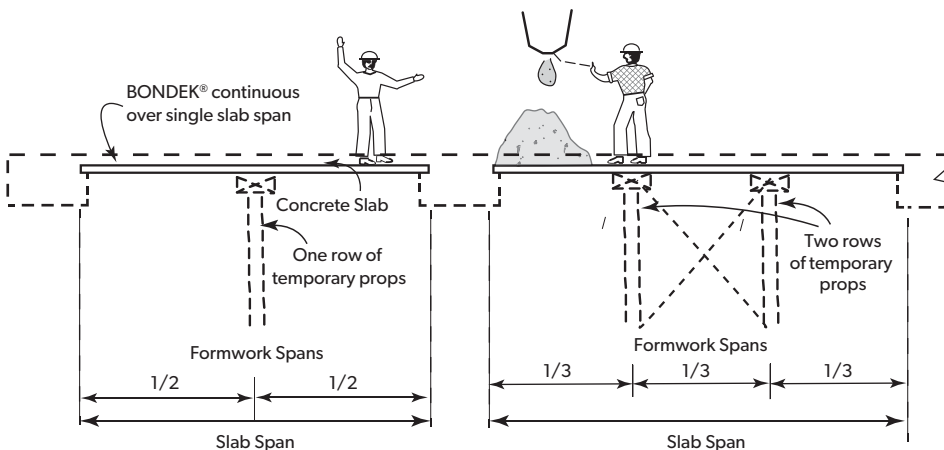
**Figure 2**

BONDEK® sheet continuous over 2 slab spans.



**Figure 3**

Concrete frame construction. BONDEK® sheet continuous over single slab span.



# FORMWORK/SLAB SPAN TABLES

## Maximum slab spans, mm

### BONDEK® sheets continuous over single slab span

#### Formwork deflections limits L/240 (Visual appearance important)

| Slab Depth D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |      | 1.0 BMT BONDEK®<br>No of props per span |      |      |
|-------------------|---|------|------|--|------|------|---|------|------|---|------|------|
|                   | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2    | 0                                       | 1    | 2    |
| 100               | 2000                                    | 4950 | 7350 | 2150                                     | 5850 | 8150 | 2250                                    | 6300 | 8700 | 2350                                    | 6500 | 9050 |
| 110               | 1900                                    | 4750 | 7150 | 2050                                     | 5700 | 7900 | 2200                                    | 6100 | 8450 | 2250                                    | 6350 | 8800 |
| 120               | 1800                                    | 4650 | 6900 | 2000                                     | 5550 | 7700 | 2150                                    | 5950 | 8250 | 2200                                    | 6150 | 8550 |
| 130               | 1750                                    | 4500 | 6650 | 1950                                     | 5400 | 7500 | 2100                                    | 5800 | 8050 | 2150                                    | 6000 | 8350 |
| 140               | 1700                                    | 4400 | 6400 | 1900                                     | 5300 | 7300 | 2050                                    | 5650 | 7850 | 2100                                    | 5900 | 8100 |
| 150               | 1650                                    | 4300 | 6200 | 1850                                     | 5200 | 7100 | 2000                                    | 5550 | 7600 | 2050                                    | 5750 | 7900 |
| 160               | 1600                                    | 4250 | 6050 | 1750                                     | 5050 | 6900 | 1900                                    | 5450 | 7400 | 2000                                    | 5650 | 7700 |
| 170               | 1550                                    | 4150 | 5850 | 1750                                     | 5000 | 6750 | 1850                                    | 5300 | 7250 | 1950                                    | 5550 | 7500 |
| 180               | 1550                                    | 4050 | 5700 | 1700                                     | 4900 | 6550 | 1850                                    | 5200 | 7050 | 1900                                    | 5400 | 7350 |
| 190               | 1500                                    | 4000 | 5550 | 1650                                     | 4750 | 6400 | 1800                                    | 5100 | 6900 | 1850                                    | 5300 | 7200 |
| 200               | 1450                                    | 3900 | 5400 | 1600                                     | 4650 | 6250 | 1750                                    | 5000 | 6750 | 1850                                    | 5200 | 7050 |
| 210               | 1400                                    | 3850 | 5300 | 1550                                     | 4550 | 6150 | 1700                                    | 4900 | 6600 | 1800                                    | 5050 | 6900 |
| 220               | 1400                                    | 3800 | 5200 | 1550                                     | 4450 | 6000 | 1650                                    | 4800 | 6500 | 1750                                    | 5000 | 6800 |
| 230               | 1350                                    | 3750 | 5050 | 1500                                     | 4350 | 5900 | 1650                                    | 4700 | 6400 | 1700                                    | 4900 | 6650 |
| 240               | 1350                                    | 3700 | 4950 | 1500                                     | 4300 | 5800 | 1600                                    | 4600 | 6250 | 1700                                    | 4800 | 6550 |
| 250               | 1300                                    | 3600 | 4850 | 1450                                     | 4200 | 5650 | 1600                                    | 4550 | 6150 | 1650                                    | 4750 | 6450 |


## Maximum slab spans, mm

### BONDEK® sheets continuous over single slab span

#### Formwork deflections limits L/130 (Visual appearance not important)

| Slab Depth D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |       | 1.0 BMT BONDEK®<br>No of props per span |      |       |
|-------------------|---|------|------|--|------|------|---|------|-------|---|------|-------|
|                   | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2     | 0                                       | 1    | 2     |
| 100               | 2100                                    | 4800 | 7200 | 2550                                     | 5900 | 8850 | 2700                                    | 7100 | 10000 | 2800                                    | 7700 | 10000 |
| 110               | 2050                                    | 4700 | 7050 | 2500                                     | 5750 | 8650 | 2650                                    | 6900 | 10000 | 2700                                    | 7450 | 10000 |
| 120               | 2000                                    | 4550 | 6850 | 2450                                     | 5600 | 8400 | 2550                                    | 6700 | 9850  | 2650                                    | 7300 | 10000 |
| 130               | 1950                                    | 4450 | 6700 | 2350                                     | 5450 | 8200 | 2500                                    | 6550 | 9650  | 2600                                    | 7100 | 10000 |
| 140               | 1950                                    | 4350 | 6550 | 2300                                     | 5350 | 8050 | 2450                                    | 6400 | 9450  | 2550                                    | 6950 | 9800  |
| 150               | 1900                                    | 4250 | 6400 | 2250                                     | 5250 | 7850 | 2400                                    | 6250 | 9250  | 2500                                    | 6800 | 9600  |
| 160               | 1850                                    | 4200 | 6300 | 2200                                     | 5100 | 7700 | 2350                                    | 6100 | 9100  | 2450                                    | 6650 | 9450  |
| 170               | 1800                                    | 4100 | 6150 | 2200                                     | 5000 | 7550 | 2300                                    | 6000 | 8900  | 2400                                    | 6500 | 9250  |
| 180               | 1800                                    | 4050 | 6050 | 2150                                     | 4950 | 7400 | 2250                                    | 5900 | 8750  | 2350                                    | 6400 | 9100  |
| 190               | 1750                                    | 3950 | 5950 | 2100                                     | 4850 | 7250 | 2250                                    | 5750 | 8650  | 2300                                    | 6250 | 8950  |
| 200               | 1750                                    | 3900 | 5850 | 2050                                     | 4750 | 7150 | 2200                                    | 5650 | 8500  | 2250                                    | 6150 | 8800  |
| 210               | 1700                                    | 3850 | 5750 | 2050                                     | 4700 | 7050 | 2150                                    | 5550 | 8350  | 2250                                    | 6050 | 8700  |
| 220               | 1700                                    | 3750 | 5650 | 2000                                     | 4600 | 6900 | 2150                                    | 5500 | 8250  | 2200                                    | 5950 | 8550  |
| 230               | 1650                                    | 3700 | 5550 | 2000                                     | 4550 | 6800 | 2100                                    | 5400 | 8100  | 2200                                    | 5850 | 8450  |
| 240               | 1650                                    | 3650 | 5500 | 1950                                     | 4450 | 6700 | 2050                                    | 5300 | 7950  | 2150                                    | 5750 | 8350  |
| 250               | 1600                                    | 3600 | 5400 | 1900                                     | 4400 | 6600 | 2050                                    | 5250 | 7850  | 2100                                    | 5650 | 8200  |

Notes:

1. These are formwork selection tables only. Maximum slab spans in these tables shall be designed by a qualified structural engineer.
2. Use BONDEK® design software for support widths other than 100mm.
3. 1 kPa Live Load due to stacked materials is used - this shall be indicated on formwork documentation and controlled on-site.
4.  The availability of 0.9mm BMT BONDEK® is subject to enquiry.
5. Refer to General Engineering Notes when using these tables.

## Maximum slab spans, mm

### BONDEK® sheets continuous over 2 slab spans

#### Formwork deflections limits L/240 (Visual appearance important)

#### Equal slab spans

| Slab depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |      | 1.0 BMT BONDEK®<br>No of props per span |      |      |
|----------------------|---|------|------|--|------|------|---|------|------|---|------|------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2    | 0                                       | 1    | 2    |
| 100                  | 2450                                    | 4900 | 7350 | 2900                                     | 5550 | 8350 | 3150                                    | 5900 | 8900 | 3250                                    | 6150 | 9250 |
| 110                  | 2350                                    | 4750 | 7150 | 2850                                     | 5400 | 8100 | 3050                                    | 5750 | 8650 | 3150                                    | 5950 | 8950 |
| 120                  | 2300                                    | 4650 | 6950 | 2750                                     | 5250 | 7850 | 2950                                    | 5600 | 8400 | 3050                                    | 5800 | 8750 |
| 130                  | 2250                                    | 4500 | 6800 | 2700                                     | 5100 | 7650 | 2900                                    | 5450 | 8200 | 3000                                    | 5650 | 8500 |
| 140                  | 2200                                    | 4400 | 6600 | 2650                                     | 5000 | 7500 | 2800                                    | 5350 | 8000 | 2950                                    | 5550 | 8300 |
| 150                  | 2150                                    | 4250 | 6400 | 2600                                     | 4850 | 7300 | 2750                                    | 5200 | 7800 | 2850                                    | 5400 | 8100 |
| 160                  | 2100                                    | 4150 | 6200 | 2500                                     | 4750 | 7100 | 2700                                    | 5050 | 7600 | 2800                                    | 5250 | 7900 |
| 170                  | 2050                                    | 4000 | 6050 | 2500                                     | 4600 | 6950 | 2650                                    | 4950 | 7400 | 2750                                    | 5150 | 7700 |
| 180                  | 2000                                    | 3900 | 5900 | 2450                                     | 4500 | 6750 | 2600                                    | 4800 | 7250 | 2700                                    | 5000 | 7550 |
| 190                  | 2000                                    | 3800 | 5750 | 2350                                     | 4400 | 6600 | 2550                                    | 4700 | 7100 | 2650                                    | 4900 | 7350 |
| 200                  | 1950                                    | 3700 | 5600 | 2300                                     | 4300 | 6450 | 2500                                    | 4600 | 6950 | 2600                                    | 4800 | 7200 |
| 210                  | 1900                                    | 3650 | 5450 | 2250                                     | 4200 | 6300 | 2450                                    | 4500 | 6800 | 2500                                    | 4700 | 7100 |
| 220                  | 1900                                    | 3550 | 5350 | 2200                                     | 4100 | 6200 | 2400                                    | 4450 | 6650 | 2500                                    | 4600 | 6950 |
| 230                  | 1850                                    | 3450 | 5200 | 2150                                     | 4050 | 6050 | 2350                                    | 4350 | 6550 | 2450                                    | 4550 | 6850 |
| 240                  | 1800                                    | 3400 | 5100 | 2150                                     | 3950 | 5950 | 2300                                    | 4300 | 6450 | 2400                                    | 4450 | 6700 |
| 250                  | 1800                                    | 3350 | 5000 | 2100                                     | 3900 | 5850 | 2250                                    | 4200 | 6300 | 2350                                    | 4400 | 6600 |

## Maximum slab spans, mm


### BONDEK® sheets continuous over 2 slab spans

#### Formwork deflections limits L/130 (Visual appearance not important)

#### Equal slab spans

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |       | 1.0 BMT BONDEK®<br>No of props per span |      |       |
|----------------------|---|------|------|--|------|------|---|------|-------|---|------|-------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2     | 0                                       | 1    | 2     |
| 100                  | 2400                                    | 4800 | 7200 | 2950                                     | 5900 | 8850 | 3550                                    | 7050 | 10000 | 3850                                    | 7300 | 10000 |
| 110                  | 2350                                    | 4700 | 7050 | 2850                                     | 5750 | 8650 | 3450                                    | 6850 | 10000 | 3700                                    | 7100 | 10000 |
| 120                  | 2250                                    | 4550 | 6850 | 2800                                     | 5600 | 8400 | 3350                                    | 6700 | 10000 | 3650                                    | 6950 | 10000 |
| 130                  | 2200                                    | 4450 | 6700 | 2700                                     | 5450 | 8200 | 3250                                    | 6550 | 9800  | 3550                                    | 6800 | 10000 |
| 140                  | 2150                                    | 4350 | 6550 | 2650                                     | 5350 | 8050 | 3200                                    | 6400 | 9600  | 3450                                    | 6650 | 10000 |
| 150                  | 2100                                    | 4250 | 6400 | 2600                                     | 5250 | 7850 | 3100                                    | 6250 | 9400  | 3400                                    | 6550 | 9800  |
| 160                  | 2100                                    | 4200 | 6300 | 2550                                     | 5100 | 7700 | 3050                                    | 6100 | 9200  | 3300                                    | 6400 | 9600  |
| 170                  | 2050                                    | 4100 | 6150 | 2500                                     | 5000 | 7550 | 3000                                    | 6000 | 9000  | 3250                                    | 6300 | 9450  |
| 180                  | 2000                                    | 4050 | 6050 | 2450                                     | 4950 | 7440 | 2950                                    | 5900 | 8850  | 3200                                    | 6200 | 9300  |
| 190                  | 1950                                    | 3950 | 5950 | 2400                                     | 4850 | 7250 | 2850                                    | 5750 | 8650  | 3100                                    | 6100 | 9150  |
| 200                  | 1950                                    | 3900 | 5850 | 2350                                     | 4750 | 7150 | 2800                                    | 5650 | 8500  | 3050                                    | 6000 | 9000  |
| 210                  | 1900                                    | 3850 | 5750 | 2350                                     | 4700 | 7050 | 2750                                    | 5550 | 8350  | 3000                                    | 5900 | 8850  |
| 220                  | 1850                                    | 3750 | 5650 | 2300                                     | 4600 | 6900 | 2750                                    | 5500 | 8250  | 2950                                    | 5800 | 8750  |
| 230                  | 1850                                    | 3700 | 5550 | 2250                                     | 4550 | 6800 | 2700                                    | 5400 | 8100  | 2900                                    | 5750 | 8650  |
| 240                  | 1800                                    | 3650 | 5500 | 2200                                     | 4450 | 6700 | 2650                                    | 5300 | 7950  | 2850                                    | 5650 | 8500  |
| 250                  | 1800                                    | 3600 | 5400 | 2200                                     | 4400 | 6600 | 2600                                    | 5250 | 7850  | 2800                                    | 5600 | 8400  |

Notes:

1. These are formwork selection tables only. Maximum slab spans in these tables shall be designed by a qualified structural engineer.
2. Use BONDEK® design software for support widths other than 100mm.
3. 1 kPa Live Load due to stacked materials is used - this shall be indicated on formwork documentation and controlled on-site.
4.  The availability of 0.9mm BMT BONDEK® is subject to enquiry.
5. Refer to General Engineering Notes when using these tables.

**Maximum slab spans, mm**

**BONDEK® sheets continuous over 3 or more slab spans**

**Formwork deflections limits L/240 (Visual appearance important)**

**Equal slab spans**

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |      | 1.0 BMT BONDEK®<br>No of props per span |      |      |
|----------------------|---|------|------|--|------|------|---|------|------|---|------|------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2    | 0                                       | 1    | 2    |
| 100                  | 2450                                    | 4900 | 7350 | 2700                                     | 5550 | 8350 | 2900                                    | 5900 | 8900 | 3000                                    | 6150 | 9250 |
| 110                  | 2350                                    | 4750 | 7150 | 2600                                     | 5400 | 8100 | 2800                                    | 5750 | 8650 | 2900                                    | 5950 | 8950 |
| 120                  | 2300                                    | 4650 | 6950 | 2550                                     | 5250 | 7850 | 2750                                    | 5600 | 8400 | 2850                                    | 5800 | 8750 |
| 130                  | 2200                                    | 4500 | 6800 | 2500                                     | 5100 | 7650 | 2650                                    | 5450 | 8200 | 2750                                    | 5650 | 8500 |
| 140                  | 2100                                    | 4400 | 6600 | 2450                                     | 5000 | 7500 | 2600                                    | 5350 | 8000 | 2700                                    | 5550 | 8300 |
| 150                  | 2050                                    | 4250 | 6400 | 2350                                     | 4850 | 7300 | 2500                                    | 5200 | 7800 | 2600                                    | 5400 | 8100 |
| 160                  | 2000                                    | 4150 | 6200 | 2300                                     | 4750 | 7100 | 2450                                    | 5050 | 7600 | 2550                                    | 5250 | 7900 |
| 170                  | 1950                                    | 4000 | 6050 | 2250                                     | 4600 | 6950 | 2400                                    | 4950 | 7400 | 2500                                    | 5150 | 7700 |
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| 200                  | 1800                                    | 3700 | 5600 | 2050                                     | 4300 | 6450 | 2250                                    | 4600 | 6950 | 2350                                    | 4800 | 7200 |
| 210                  | 1750                                    | 3650 | 5450 | 2050                                     | 4200 | 6300 | 2200                                    | 4500 | 6800 | 2300                                    | 4700 | 7100 |
| 220                  | 1700                                    | 3550 | 5350 | 2000                                     | 4100 | 6200 | 2150                                    | 4450 | 6650 | 2250                                    | 4600 | 6950 |
| 230                  | 1650                                    | 3450 | 5200 | 1950                                     | 4050 | 6050 | 2100                                    | 4350 | 6550 | 2200                                    | 4550 | 6850 |
| 240                  | 1650                                    | 3400 | 5100 | 1900                                     | 3950 | 5950 | 2050                                    | 4300 | 6450 | 2150                                    | 4450 | 6700 |
| 250                  | 1600                                    | 3350 | 5000 | 1850                                     | 3900 | 5850 | 2050                                    | 4200 | 6300 | 2150                                    | 4400 | 6600 |

**Maximum slab spans, mm**


**BONDEK® sheets continuous over 3 or more slab spans**

**Formwork deflections limits L/130 (Visual appearance not important)**

**Equal slab spans**

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |       | 1.0 BMT BONDEK®<br>No of props per span |      |       |
|----------------------|---|------|------|--|------|------|---|------|-------|---|------|-------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2     | 0                                       | 1    | 2     |
| 100                  | 2400                                    | 4800 | 7200 | 2950                                     | 5900 | 8850 | 3450                                    | 7050 | 10000 | 3550                                    | 7300 | 10000 |
| 110                  | 2350                                    | 4700 | 7050 | 2850                                     | 5750 | 8650 | 3350                                    | 6850 | 10000 | 3500                                    | 7100 | 10000 |
| 120                  | 2250                                    | 4550 | 6850 | 2800                                     | 5600 | 8400 | 3250                                    | 6700 | 10000 | 3400                                    | 6950 | 10000 |
| 130                  | 2200                                    | 4450 | 6700 | 2700                                     | 5450 | 8200 | 3200                                    | 6550 | 9800  | 3300                                    | 6800 | 10000 |
| 140                  | 2150                                    | 4350 | 6550 | 2650                                     | 5350 | 8050 | 3150                                    | 6400 | 9600  | 3250                                    | 6650 | 10000 |
| 150                  | 2100                                    | 4250 | 6400 | 2600                                     | 5250 | 7850 | 3050                                    | 6250 | 9400  | 3200                                    | 6550 | 9800  |
| 160                  | 2100                                    | 4200 | 6300 | 2550                                     | 5100 | 7700 | 3000                                    | 6100 | 9200  | 3150                                    | 6400 | 9600  |
| 170                  | 2050                                    | 4100 | 6150 | 2500                                     | 5000 | 7550 | 2950                                    | 6000 | 9000  | 3050                                    | 6300 | 9450  |
| 180                  | 2000                                    | 4050 | 6050 | 2450                                     | 4950 | 7440 | 2900                                    | 5900 | 8850  | 3000                                    | 6200 | 9300  |
| 190                  | 1950                                    | 3950 | 5950 | 2400                                     | 4850 | 7250 | 2850                                    | 5750 | 8650  | 2950                                    | 6100 | 9150  |
| 200                  | 1950                                    | 3900 | 5850 | 2350                                     | 4750 | 7150 | 2800                                    | 5650 | 8500  | 2900                                    | 6000 | 9000  |
| 210                  | 1900                                    | 3850 | 5750 | 2350                                     | 4700 | 7050 | 2750                                    | 5550 | 8350  | 2900                                    | 5900 | 8850  |
| 220                  | 1850                                    | 3750 | 5650 | 2300                                     | 4600 | 6900 | 2750                                    | 5500 | 8250  | 2850                                    | 5800 | 8750  |
| 230                  | 1850                                    | 3700 | 5550 | 2250                                     | 4550 | 6800 | 2700                                    | 5400 | 8100  | 2800                                    | 5750 | 8650  |
| 240                  | 1800                                    | 3650 | 5500 | 2200                                     | 4450 | 6700 | 2650                                    | 5300 | 7950  | 2750                                    | 5650 | 8500  |
| 250                  | 1800                                    | 3600 | 5400 | 2200                                     | 4400 | 6600 | 2600                                    | 5250 | 7850  | 2700                                    | 5600 | 8400  |

Notes:

1. These are formwork selection tables only. Maximum slab spans in these tables shall be designed by a qualified structural engineer.
2. Use BONDEK® design software for support widths other than 100mm.
3. 1 kPa Live Load due to stacked materials is used - this shall be indicated on formwork documentation and controlled on-site.
4.  The availability of 0.9mm BMT BONDEK® is subject to enquiry.
5. Refer to General Engineering Notes when using these tables.

## Maximum slab spans, mm

### BONDEK® sheets continuous over 2 slab spans

#### Formwork deflections limits L/240 (Visual appearance important)

#### Slabs spans ratio up to 1:1.2

| Slab depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |      | 1.0 BMT BONDEK®<br>No of props per span |      |      |
|----------------------|---|------|------|--|------|------|---|------|------|---|------|------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2    | 0                                       | 1    | 2    |
| 100                  | 2400                                    | 4900 | 7250 | 2750                                     | 5350 | 8000 | 2950                                    | 5700 | 8550 | 3050                                    | 5950 | 8900 |
| 110                  | 2350                                    | 4650 | 7000 | 2700                                     | 5200 | 7800 | 2850                                    | 5550 | 8300 | 3000                                    | 5750 | 8650 |
| 120                  | 2300                                    | 4450 | 6700 | 2600                                     | 5050 | 7600 | 2800                                    | 5400 | 8100 | 2900                                    | 5600 | 8400 |
| 130                  | 2200                                    | 4300 | 6500 | 2550                                     | 4900 | 7400 | 2700                                    | 5250 | 7900 | 2850                                    | 5450 | 8150 |
| 140                  | 2150                                    | 4150 | 6250 | 2500                                     | 4750 | 7150 | 2650                                    | 5100 | 7650 | 2750                                    | 5300 | 7950 |
| 150                  | 2100                                    | 4050 | 6050 | 2450                                     | 4600 | 6950 | 2600                                    | 4950 | 7450 | 2700                                    | 5150 | 7700 |
| 160                  | 2050                                    | 3900 | 5900 | 2350                                     | 4500 | 6750 | 2500                                    | 4800 | 7250 | 2600                                    | 5000 | 7550 |
| 170                  | 2000                                    | 3800 | 5700 | 2300                                     | 4350 | 6550 | 2450                                    | 4700 | 7050 | 2550                                    | 4900 | 7350 |
| 180                  | 1950                                    | 3700 | 5550 | 2250                                     | 4250 | 6400 | 2400                                    | 4600 | 6900 | 2500                                    | 4800 | 7200 |
| 190                  | 1900                                    | 3600 | 5400 | 2200                                     | 4150 | 6250 | 2350                                    | 4500 | 6750 | 2450                                    | 4700 | 7050 |
| 200                  | 1850                                    | 3500 | 5300 | 2150                                     | 4050 | 6100 | 2300                                    | 4400 | 6600 | 2400                                    | 4600 | 6900 |
| 210                  | 1800                                    | 3450 | 5150 | 2100                                     | 4000 | 6000 | 2250                                    | 4300 | 6450 | 2350                                    | 4500 | 6750 |
| 220                  | 1750                                    | 3350 | 5050 | 2050                                     | 3900 | 5850 | 2200                                    | 4200 | 6350 | 2300                                    | 4400 | 6650 |
| 230                  | 1750                                    | 3300 | 4950 | 2000                                     | 3800 | 5750 | 2150                                    | 4150 | 6250 | 2250                                    | 4350 | 6500 |
| 240                  | 1700                                    | 3200 | 4850 | 1950                                     | 3750 | 5650 | 2150                                    | 4050 | 6100 | 2200                                    | 4250 | 6400 |
| 250                  | 1650                                    | 3150 | 4750 | 1950                                     | 3700 | 5550 | 2100                                    | 4000 | 6050 | 2200                                    | 4200 | 6300 |

## Maximum slab spans, mm


### BONDEK® sheets continuous over 2 slab spans

#### Formwork deflections limits L/130 (Visual appearance not important)

#### Slabs spans ratio up to 1:1.2

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |       | 1.0 BMT BONDEK®<br>No of props per span |      |       |
|----------------------|---|------|------|--|------|------|---|------|-------|---|------|-------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2     | 0                                       | 1    | 2     |
| 100                  | 2350                                    | 4750 | 7150 | 2900                                     | 5850 | 8750 | 3500                                    | 6800 | 10000 | 3650                                    | 7050 | 10000 |
| 110                  | 2300                                    | 4650 | 6950 | 2850                                     | 5700 | 8550 | 3400                                    | 6600 | 9950  | 3550                                    | 6850 | 10000 |
| 120                  | 2250                                    | 4500 | 6800 | 2750                                     | 5550 | 8350 | 3300                                    | 6450 | 9700  | 3450                                    | 6700 | 10000 |
| 130                  | 2200                                    | 4450 | 6650 | 2700                                     | 5400 | 8150 | 3200                                    | 6300 | 9500  | 3400                                    | 6550 | 9850  |
| 140                  | 2150                                    | 4300 | 6500 | 2650                                     | 5300 | 7950 | 3150                                    | 6200 | 9300  | 3300                                    | 6400 | 9650  |
| 150                  | 2100                                    | 4250 | 6350 | 2600                                     | 5200 | 7800 | 3100                                    | 6050 | 9100  | 3250                                    | 6300 | 9450  |
| 160                  | 2050                                    | 4150 | 6250 | 2500                                     | 5050 | 7600 | 3000                                    | 5950 | 8450  | 3200                                    | 6150 | 9250  |
| 170                  | 2000                                    | 4050 | 6100 | 2450                                     | 4950 | 7450 | 2950                                    | 5850 | 8750  | 3150                                    | 6050 | 9100  |
| 180                  | 2000                                    | 4000 | 6000 | 2450                                     | 4900 | 7350 | 2900                                    | 5750 | 8600  | 3100                                    | 5950 | 8950  |
| 190                  | 1950                                    | 3950 | 5900 | 2400                                     | 4800 | 7200 | 2850                                    | 5650 | 8500  | 3050                                    | 5850 | 8800  |
| 200                  | 1900                                    | 3850 | 5800 | 2350                                     | 4700 | 7050 | 2800                                    | 5550 | 8350  | 3000                                    | 5750 | 8650  |
| 210                  | 1900                                    | 3800 | 5700 | 2300                                     | 4650 | 6950 | 2750                                    | 5450 | 8200  | 2950                                    | 5700 | 8550  |
| 220                  | 1850                                    | 3750 | 5650 | 2250                                     | 4550 | 6850 | 2700                                    | 5400 | 8100  | 2900                                    | 5600 | 8400  |
| 230                  | 1850                                    | 3700 | 5550 | 2250                                     | 4500 | 6750 | 2650                                    | 5300 | 8000  | 2850                                    | 5500 | 8300  |
| 240                  | 1800                                    | 3650 | 5450 | 2200                                     | 4400 | 6650 | 2600                                    | 5250 | 7850  | 2850                                    | 5450 | 8150  |
| 250                  | 1800                                    | 3600 | 5400 | 2150                                     | 4350 | 6550 | 2550                                    | 5150 | 7750  | 2800                                    | 5350 | 8050  |

#### Notes:

1. These are formwork selection tables only. Maximum slab spans in these tables shall be designed by a qualified structural engineer.
2. Use BONDEK® design software for support widths other than 100mm.
3. 1 kPa Live Load due to stacked materials is used - this shall be indicated on formwork documentation and controlled on-site.
4.  The availability of 0.9mm BMT BONDEK® is subject to enquiry.
5. Refer to General Engineering Notes when using these tables.

**Maximum slab spans, mm**

**BONDEK® sheest continuous over 3 or more slab spans**

**Formwork deflections limits L/240 (Visual appearance important)**

**Slabs spans ratio up to 1.1.2**

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |      | 1.0 BMT BONDEK®<br>No of props per span |      |      |
|----------------------|---|------|------|--|------|------|---|------|------|---|------|------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2    | 0                                       | 1    | 2    |
| 100                  | 2350                                    | 4900 | 7250 | 2600                                     | 5350 | 8000 | 2800                                    | 5700 | 8550 | 2900                                    | 5950 | 8900 |
| 110                  | 2250                                    | 4650 | 7000 | 2550                                     | 5200 | 7800 | 2700                                    | 5550 | 8300 | 2800                                    | 5750 | 8650 |
| 120                  | 2150                                    | 4450 | 6700 | 2450                                     | 5050 | 7600 | 2650                                    | 5400 | 8100 | 2750                                    | 5600 | 8400 |
| 130                  | 2100                                    | 4300 | 6500 | 2400                                     | 4900 | 7400 | 2550                                    | 5250 | 7900 | 2650                                    | 5450 | 8150 |
| 140                  | 2000                                    | 4150 | 6250 | 2300                                     | 4750 | 7150 | 2500                                    | 5100 | 7650 | 2600                                    | 5300 | 7950 |
| 150                  | 1950                                    | 4050 | 6050 | 2250                                     | 4600 | 6950 | 2400                                    | 4950 | 7450 | 2500                                    | 5150 | 7700 |
| 160                  | 1900                                    | 3900 | 5900 | 2200                                     | 4500 | 6750 | 2350                                    | 4800 | 7250 | 2450                                    | 5000 | 7550 |
| 170                  | 1850                                    | 3800 | 5700 | 2150                                     | 4350 | 6550 | 2300                                    | 4700 | 7050 | 2400                                    | 4900 | 7350 |
| 180                  | 1800                                    | 3700 | 5550 | 2050                                     | 4250 | 6400 | 2250                                    | 4600 | 6900 | 2350                                    | 4800 | 7200 |
| 190                  | 1750                                    | 3600 | 5400 | 2000                                     | 4150 | 6250 | 2200                                    | 4500 | 6750 | 2300                                    | 4700 | 7050 |
| 200                  | 1700                                    | 3500 | 5300 | 2000                                     | 4050 | 6100 | 2150                                    | 4400 | 6600 | 2250                                    | 4600 | 6900 |
| 210                  | 1650                                    | 3450 | 5150 | 1950                                     | 4000 | 6000 | 2100                                    | 4300 | 6450 | 2200                                    | 4500 | 6750 |
| 220                  | 1650                                    | 3350 | 5050 | 1900                                     | 3900 | 5850 | 2050                                    | 4200 | 6350 | 2150                                    | 4400 | 6650 |
| 230                  | 1600                                    | 3300 | 4950 | 1850                                     | 3800 | 5750 | 2000                                    | 4150 | 6250 | 2100                                    | 4350 | 6500 |
| 240                  | 1550                                    | 3200 | 4850 | 1800                                     | 3750 | 5650 | 2000                                    | 4050 | 6100 | 2050                                    | 4250 | 6400 |
| 250                  | 1550                                    | 3150 | 4750 | 1800                                     | 3700 | 5550 | 1950                                    | 4000 | 6050 | 2050                                    | 4200 | 6300 |

**Maximum slab spans, mm**


**BONDEK® sheets continuous over 3 or more slab spans**

**Formwork deflections limits L/130 (Visual appearance not important)**

**Slabs spans ratio up to 1.1.2**

| Slab Depth<br>D (mm) | 0.6 BMT BONDEK®<br>No of props per span |      |      | 0.75 BMT BONDEK®<br>No of props per span |      |      | 0.9 BMT BONDEK®<br>No of props per span |      |       | 1.0 BMT BONDEK®<br>No of props per span |      |       |
|----------------------|---|------|------|--|------|------|---|------|-------|---|------|-------|
|                      | 0                                       | 1    | 2    | 0  | 1    | 2    | 0                                       | 1    | 2     | 0                                       | 1    | 2     |
| 100                  | 2350                                    | 4750 | 7150 | 2900                                     | 5850 | 8750 | 3350                                    | 6800 | 10000 | 3450                                    | 7050 | 10000 |
| 110                  | 2300                                    | 4650 | 6950 | 2850                                     | 5700 | 8550 | 3250                                    | 6600 | 9950  | 3350                                    | 6850 | 10000 |
| 120                  | 2250                                    | 4500 | 6800 | 2750                                     | 5550 | 8350 | 3150                                    | 6450 | 9700  | 3300                                    | 6700 | 10000 |
| 130                  | 2200                                    | 4450 | 6650 | 2700                                     | 5400 | 8150 | 3100                                    | 6300 | 9500  | 3200                                    | 6550 | 9850  |
| 140                  | 2150                                    | 4300 | 6500 | 2650                                     | 5300 | 7950 | 3050                                    | 6200 | 9300  | 3150                                    | 6400 | 9650  |
| 150                  | 2100                                    | 4250 | 6350 | 2600                                     | 5200 | 7800 | 2950                                    | 6050 | 9100  | 3100                                    | 6300 | 9450  |
| 160                  | 2050                                    | 4150 | 6250 | 2500                                     | 5050 | 7600 | 2900                                    | 5950 | 8450  | 3000                                    | 6150 | 9250  |
| 170                  | 2000                                    | 4050 | 6100 | 2450                                     | 4950 | 7450 | 2850                                    | 5850 | 8750  | 2950                                    | 6050 | 9100  |
| 180                  | 2000                                    | 4000 | 6000 | 2450                                     | 4900 | 7350 | 2800                                    | 5750 | 8600  | 2900                                    | 5950 | 8950  |
| 190                  | 1950                                    | 3950 | 5900 | 2400                                     | 4800 | 7200 | 2750                                    | 5650 | 8500  | 2850                                    | 5850 | 8800  |
| 200                  | 1900                                    | 3850 | 5800 | 2350                                     | 4700 | 7050 | 2700                                    | 5550 | 8350  | 2850                                    | 5750 | 8650  |
| 210                  | 1900                                    | 3800 | 5700 | 2300                                     | 4650 | 6950 | 2700                                    | 5450 | 8200  | 2800                                    | 5700 | 8550  |
| 220                  | 1850                                    | 3750 | 5650 | 2250                                     | 4550 | 6850 | 2650                                    | 5400 | 8100  | 2750                                    | 5600 | 8400  |
| 230                  | 1850                                    | 3700 | 5550 | 2250                                     | 4500 | 6750 | 2600                                    | 5300 | 8000  | 2700                                    | 5500 | 8300  |
| 240                  | 1800                                    | 3650 | 5450 | 2200                                     | 4400 | 6650 | 2550                                    | 5250 | 7850  | 2650                                    | 5450 | 8150  |
| 250                  | 1800                                    | 3600 | 5400 | 2150                                     | 4350 | 6550 | 2500                                    | 5150 | 7750  | 2600                                    | 5350 | 8050  |

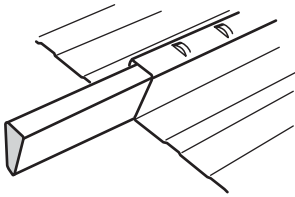
Notes:

1. These are formwork selection tables only. Maximum slab spans in these tables shall be designed by a qualified structural engineer.
2. Use BONDEK® design software for support widths other than 100mm.
3. 1 kPa Live Load due to stacked materials is used - this shall be indicated on formwork documentation and controlled on-site.
4.  The availability of 0.9mm BMT BONDEK® is subject to enquiry.
5. Refer to General Engineering Notes when using these tables.

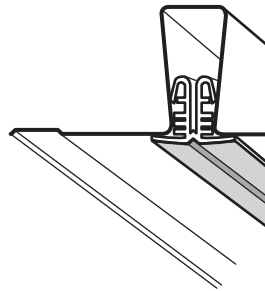


# ACCESSORIES

**Figure 4**  
BONDEK® accessories.



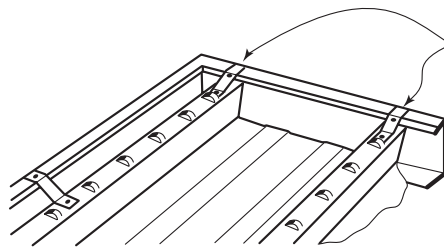
**BONFILL®**  
Polystyrene foam stops concrete and air entering ends of ribs. Stock length: 1200mm. Required: 300mm per sheet of BONDEK®.



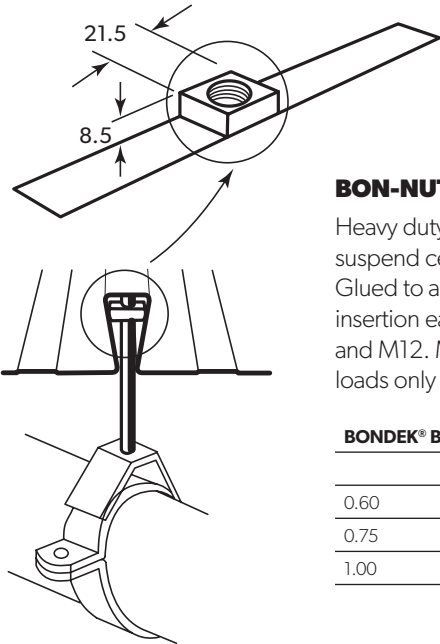
**BONSTRIP®**  
Plastic trim to cover gaps formed by ribs. Used when underside of BONDEK® forms an exposed ceiling. Stock length: 3000mm. Allows plasterboard to be fixed to BONDEK®.



**RIB END PLUG (QLD, VIC & NSW)**  
Polyethylene end plug minimises concrete slurry seeping through.



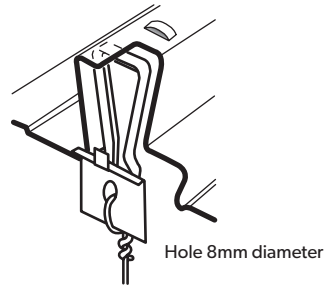
**Brackets from builders strapping**  
Straps formed on-site using builders strapping to secure top flange of the Edgeform.  
25mm x 1.0mm fixed with #10-16x16 hex. head Tek screws with drill point. Required: one every 600mm or less if aesthetics are required.



**BON-NUT**  
Heavy duty square nut to suspend ceilings or services. Glued to a paper strip it makes insertion easy. Threads: M8, M10 and M12. M6 is available for light loads only (2.7 kN or less).

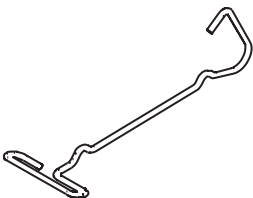
| BONDEK® BMT | Safe Load<br>kN |
|-------------|-----------------|
| 0.60        | 3.9             |
| 0.75        | 4.4             |
| 1.00        | 6.7             |

**EDGEFORM**  
A galvanised section that creates a permanent formwork at the slab edges—cut, mitred and screwed on site. 1.0mm BMT - up to 145mm slab depth. 1.2mm BMT - 150 - 175mm slab depth.



**BONWEDGE®**  
Lightweight bracket for rods to suspend ceilings or services (other than fire sprinkler systems). Max. load: 100kg.

| Configuration    | Loading   | Safe Load<br>kN |
|------------------|-----------|-----------------|
| Single BONWEDGE® | Eccentric | 1.0             |
| Double BONWEDGE® | Eccentric | 1.3             |
| Double BONWEDGE® | Central   | 1.7             |



**PT HOLD DOWN CLIP**  
Allows hold down of post-tensioning ducts.

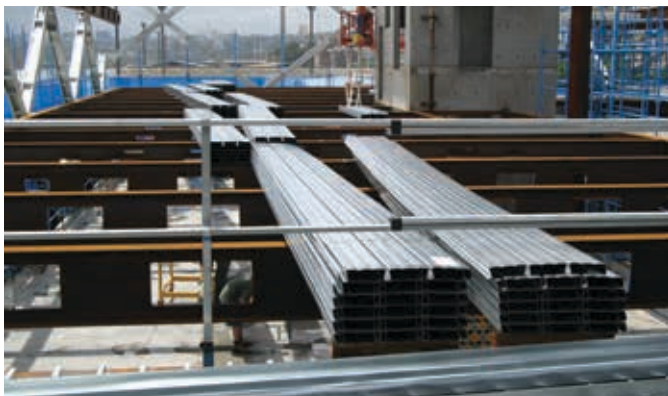
# BONDEK® INSTALLATION AND CONSTRUCTION



Step 1: Open BONDEK® sheet bundles.



Step 2: Place props if required.



Step 3: Trim BONDEK® sheets if required and place.



Step 4: Fix BONDEK® sheets to steel beams if required.



Step 5: Fix steel Edgeform.



Step 6: Cut penetration.



Step 7: Place reinforcement and post tensioning if required.



Step 7a) PT Hold Down Clip.



Step 8: Place concrete.

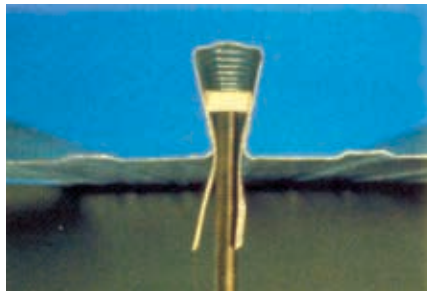


Step 9: Allow slab to cure and remove props.

Step 10: Install services and ceilings with BONDEK® accessories.



Step 10a) BONWEDGE®.



Step 10b) Bon-nut.



Step 10c) BONSTRIP®.

## GENERAL ENGINEERING NOTES

1. At a minimum, BONDEK® shall be secured at every pan at ends of sheets and also at permanent supports. Failure to secure BONDEK® at supports may lead to excessive deformation and structural failure.
  - Suitable fixing methods should be used such as spot welds, self drilling screws or drive nails. There are two sets of formwork tables:
  - Ratio of two adjacent slab spans are equal
  - The ratio of the longer slab span to the shorter slab span does not exceed 1.2, that is longer span/shorter span  $\leq 1.2$
2. The tables shall be used for normal density concrete (2400kg/m<sup>3</sup>).
3. The lines of support shall extend across the full width of the sheeting and have a minimum bearing 50mm at the ends of the sheets and 100mm at intermediate supports over which sheeting is continuous, including at props. 25mm minimum bearing length at the ends of sheets is acceptable in concrete frame construction.
4. The tables are based on the following maximum construction loads:
  - Workmen and equipment = 100kg/m<sup>2</sup>
  - Mounding of concrete = 300kg/m<sup>2</sup> over an area of 1.6 x 1.6m and zero over the remainder.
  - Stacking of material on BONDEK® sheets before placement of concrete only = 100kg/m<sup>2</sup>
5. BONDEK® sheets are readily available, custom-cut, in any length from 600mm up to 19,500mm (length tolerance +0, -10mm). Maximum and minimum lengths apply. Please contact your local service centre for details.
6. No loads from stacked materials after pour are allowed until the concrete has set.
7. The sheets shall not be end spliced or jointed.
8. Ponding dead load - the additional concrete due to ponding of the concrete from the sheeting deflection has been included.
9. Supports shall be effectively rigid and strong to support construction loads.
10. The sheeting shall not have cantilever portions.
11. Wet concrete deflection of BONDEK® =  $L/240$  or  $L/130$ , where L is the distance between centres of props, or permanent supports where there are no props.
12. The information contained in the publication is intended for guidance only. This information to be used only in conjunction with a consulting structural engineer.
13. Further details can be sought from the LYSAGHT® publication BONDEK® Design & Construction Manual or consulting Steel Direct on 1800 641 417.

## PRODUCT DESCRIPTIONS

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- (b) alter specifications shown in its promotional literature to reflect changes made after the date of such publication.

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**Technical enquiries:**  
**steeldirect@bluescopesteel.com or call 1800 641 417**

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LYT0003 25/09/15