ASTEEL GROUP

FLODEK

STRUCTURAL FORMWORK

Speedier to Higher & Wider

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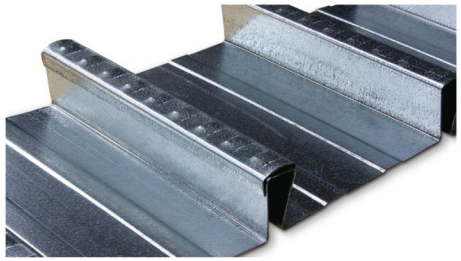
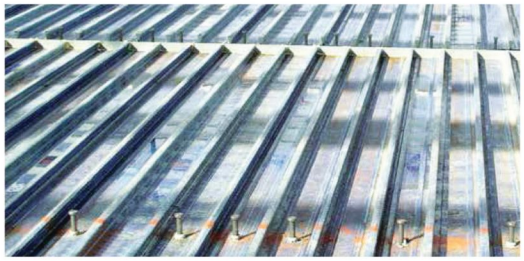
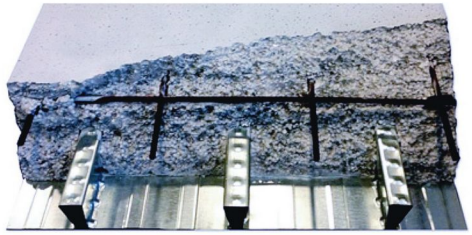




PROFILE DIMENSION



STEEL MATERIAL

FLODEK Structural Decking is roll-formed from hot dipped, zinc-coated, high strength grade steel strips. The features of ASTEEL structural decking is the profiled steel sheet acting as a longitudinal reinforcement to the composite beams and slabs. It is widely used for concrete slab construction and suitable for concrete, masonry or steel frame building construction.

MATERIAL SPECIFICATIONS

FLODEK is manufactured from high tensile steel (min 500 MPa yield stress) with a base metal thickness (BMT) of 0.75mm, 1.0mm, 1.20mm. The galvanised coating class is Z275 (min 275g/m2) in accordance with AS1397: 2001. Other base metal thicknesses and coating classes are also available on request, subjected to availability.

FEATURES

FLODEK can deliver cost savings when used in the following types of construction:
a) concrete frame building
b) residential construction
c) multi-level carparks & multi-storey buildings.
d) commercial buildings
e) shopping centres

BENEFITS

a) Permanent formwork
b) Tensile reinforcement, i.e. replace all positive reinforcement
c) Composite construction, i.e. compostie beam design reduces steel frame weight
d) Lower dead load reduces frame and foundation loading
e) Design up to four (4) hours fire resistance with exposed soffit
f) Quick and easy construction
g) Safe working platform
h) Simple construction with no specialized skills needed
i) No or mininal propping requirements
j) High structural efficiency due to high strength steel used.
k) Stiffens supporting frame in tall steel buildings
l) Suitable for most ceiling finishes, i.e. painting to soffit, plastering
m) Easily cut and fitted to shapes
n) Shear studs can be site welded through-deck for composite action
o) Can be used on steelwork, concrete, blockwork and masonry structures.
p) Ceiling and services can be easily suspended using in-house suspension systems


DESIGN FLEXIBILITY


TERMITE PROOF


RECYCLING

IMPROVED COATING


DURABILITY


ASTEEL GROUP PRODUCT

DESIGN REQUIREMENT

Table 1 FLODEK material and section properties.

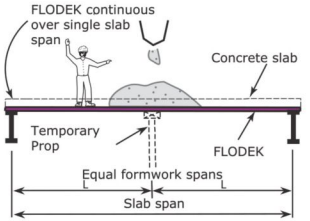
BMT (mm)	Steel Grade (MPa)	Zinc Coating Class +	2nd Moment of Area ($10^3 mm^4/m$)	X-Sectional Area (mm^2/m)	Weight (kg/m^2)
0.75	550	Z275	41.90	1248	10.32
1.00	550	Z275	55.90	1664	13.56
1.20	550	Z275	67.10	1997	16.32

+ A zinc coating of total 275g/m (including both sides) is sufficient for internal floors in a non-aggressive environment, but the specification may be varied depending on service conditions- EN1994-1-12.2(3)

Table 2 FLODEK Maximum un-propped span.

BMT	**0.75mm**						
Slab thickness (Dcs)	110	120	130	150	175	200	250
Single Span	2500	2450	2400	2300	2200	2100	1800
Continuous	3000	2900	2800	2600	2400	2200	1850
BMT	**1.00mm**						
Slab thickness (Dcs)	110	120	130	150	175	200	250
Single Span	2900	2850	2800	2700	2550	2450	2300
Continuous	3700	3600	3500	3350	3150	3000	2750
BMT	**1.20mm**						
Slab thickness (Dcs)	110	120	130	150	175	200	250
Single Span	3100	3000	2950	2850	2700	2600	2450
Continuous	4050	3950	3850	3650	3500	3300	3650

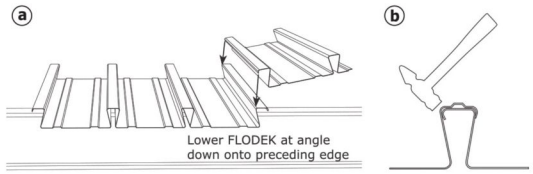
Span Table Notes
- The tables above denote maxim allowable centerline to centerline span (in mm) between supports.
- Density of wet concrete is assumed at 2400kg/m3.
- Loading configurations during the various construction stages are considered in accordance with EN1994.
- Construction load of 1.5kPa is adopted.
- The deflection limit adopted is Span/ 130. For exposed soffit, a deflection limit of Span/240 is recommended.
- Aminimum bearing width of 50mm of the permanent steel support and 125mm flange width have been considered.
- When using the table for 2 or more spans the adjacent spans should not differ in length by more than 5%.
- ASTEEL recommends a gauge of 1.00mm BMT for exposed soffit in propped applications to avoid creading of steel decking. Please contact our sales & marketing department for further information.
- Care must be exercised when placing concrete to avoid mounding.
- Wide ply strips, of 300mm wide, shall be provided to prevent any concentrated loads being applied to the sheeting to advoid direct point loading of the sheet overlap, of the overlap ribs and unsupported edges of the sheeting.



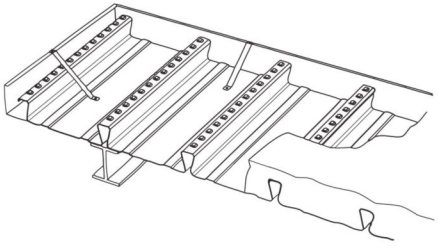
DESIGN REQUIREMENT

1. Laying FLODEK
a) Place the Flodek sheet over the supports ensuring a minimum end bearing of 50mm. If supporting on a brick or masonry wall, provide a separating strip such as malthoid.
b) Then, tap the female rib with a hammer at a 45°angle to look it into place.

2. Reinforcement
Place all reinforcement in strict accordance with the structural engineer's drawing and specification.



3. Concrete Placement
The specified grade of concrete and any chemical admixtures must be in strict accordance with AS 3600:2001 and the structural engineer's drawings and specification. The deck must be clear of any excess dirt, grease or debris as this inhibits bonding between the deck and concrete. Ensure that concrete is applied evenly over the decking surface, as mounding of the wet concrete will cause excessive local loading.



STORAGE & HANDLING

Panels are delivered to site or specified storage area, in strapped bundles. If not required for immediate use, b undles should be neatly stacked clear of the ground with a fall for drainage and protected by waterproof covers. Do not allow rain or condensation to be trapped between panels. Length manufactured according to shop drawings.

To minimize damage to the sheets, break open bundles only when installation is due to commence. Check to ensure thatany temporary supports required are in place prior to install the decking.

When lifting, it is recommended that appropriate lifting equipments are used. Unprotected chain slings can damage the bundles during lifting. When synthetics slings are used there is a risk of severing them on the edges of the decking sheets.

If timber packers are used, they should be secured to the bundle before lifting so that when slings are released they do not fall to the ground. Bundles must never be lifted using the metal banding.