

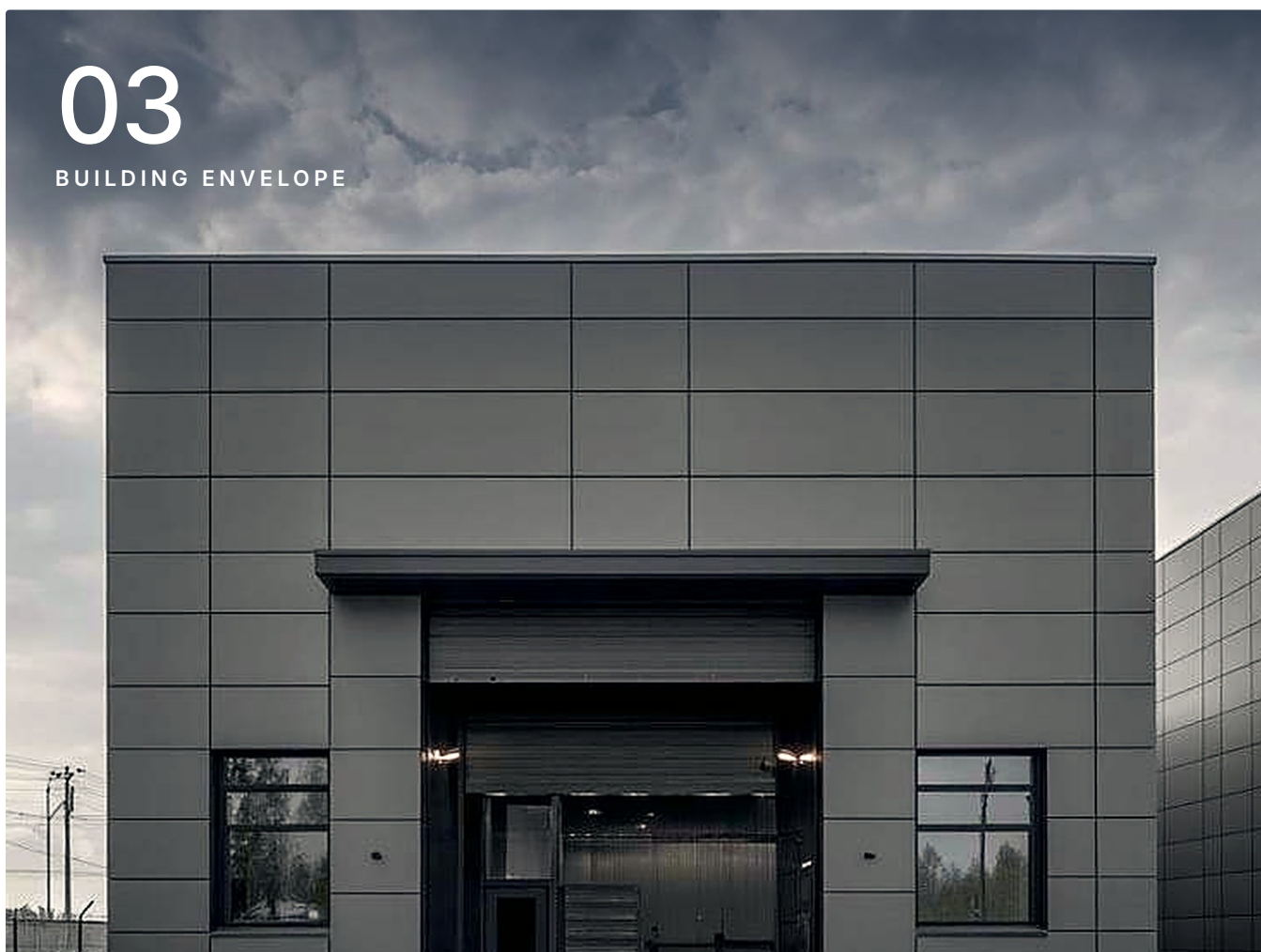
ENGINEERED TO LAST

Building envelope.

Profiled sheets, sandwich panels and composite floor deck: the complete building skin, roof, façade and floor.

03

BUILDING ENVELOPE



Building envelope.

Profiled sheets, sandwich panels and composite floor deck: the complete building skin, roof, façade and floor.

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THREE USES

Roofing: dry roofing deck, waterproofing support deck, Isotoit sandwich panel.

Façade: single-skin cladding, liner tray, Isomur sandwich panel.

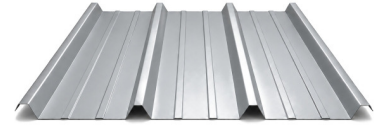
Floors: composite floor deck for steel-concrete composite slabs.

DRY ROOFING · SLOPE 7 %

Nervesco 3.333.45

Dry roofing

3-rib profiled sheet for dry roofing: high load capacity for lightweight roofs, fast and economical installation on C+ and Z purlins, 25/7 µm polyester coating.



Data sheet AS-FT-NER-004, edition 08/2026 · spans between support centrelines, unfactored loads, self-weight included, deflection L/200.

DOWNWARD LOADS AND SUCTION working spans in m · deflection L/200 · thicknesses in mm

LOAD daN/m ²	SINGLE SPAN		TWO SPANS		THREE SPANS		SUCTION, PROFILE ONLY	
	0.63	0.75	0.63	0.75	0.63	0.75	0.63	0.75
50	3.00	3.15	3.35	3.55	3.25	3.45	2.95	3.20
100	2.40	2.55	2.55	2.85	2.65	2.80	2.35	2.50
150	2.10	2.25	2.00	2.30	2.10	2.40	2.05	2.20
200	1.90	2.05	1.70	1.95	1.75	2.00	1.85	2.00
250	1.70	1.85	1.45	1.70	1.50	1.75	1.75	1.85

Above 150 daN/m², continuity is governed by the support moment and the span over continuous spans is no longer greater than the single-span value. **Supports:** spans assume an end support of at least 40 mm and an internal support of at least 60 mm; the support reaction (local web crippling) must still be checked for the actual bearing width. Under suction, the system span is the minimum of the profile-only span, fastener pull-through in the sheet, pull-out from the substructure, side-lap stitching and edge connections. Intermediate loads: linear interpolation.

THICKNESSES AND WEIGHTS

THICKNESS	WEIGHT kg/m ²
0.63 mm	6.03
0.75 mm	7.18

INSTALLATION

PROPERTY	VALUE
Minimum slope	7 % single span, 5 % continuous spans with bonded overlap
Overlap	One corrugation at side laps, 150 mm at end laps, foam fillers at the ridge
Fixing	Self-drilling screws at corrugation crests, every other corrugation in the field, every corrugation at edges

STANDARD COLOURS polyester coating 25/7 µm · EN 10169

 RAL 1015 light ivory	 RAL 5012 light blue	 RAL 5019 capri blue	 RAL 6011 reseda green	 RAL 9002 grey white	 RAL 9006 white alu.	 RAL 9007 grey alu.	 RAL 9010 pure white
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Reverse side 0742. Other RAL on request.

EFFECTIVE WIDTH
1 000 mm

THICKNESSES MM
0.63 · 0.75

RIB · PITCH MM
45 · 333

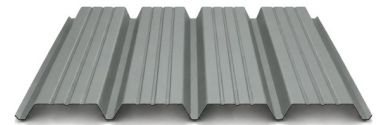
STEEL · EN 10346
S320GD+Z200

FLAT ROOFS · MEMBRANE SUPPORT

Toitesco 4.250.40

Waterproofing support deck

Waterproofing support deck for flat roofs: flat and stable surface, reliable base for PVC, TPO or bituminous membranes, excellent bending resistance.



Data sheet AS-FT-TOI-006, edition 08/2026 · sk variable action, pk permanent load excluding self-weight · combination 1.50 s + 1.35 (p + g), deflection L/200.

DOWNWARD LOADS spans in m · loads in daN/m² · thicknesses in mm

LOADS DAN/M ²			SINGLE SPAN			TWO EQUAL SPANS			THREE EQUAL SPANS		
SK	PK	TOTAL	0.75	0.88	1.00	0.75	0.88	1.00	0.75	0.88	1.00
100	15	115	2.00	2.10	2.25	2.35	2.50	2.65	2.25	2.40	2.55
125	25	150	1.80	1.95	2.05	2.15	2.30	2.45	2.10	2.25	2.35
150	25	175	1.75	1.85	1.95	2.05	2.20	2.30	2.00	2.10	2.20
175	25	200	1.65	1.75	1.85	1.95	2.10	2.20	1.90	2.00	2.10
150	120	270	1.50	1.60	1.70	1.70	1.90	2.05	1.75	1.90	2.00

Most common combinations; the full table is in the data sheet. Standard coating Z200 galvanised + polyester coating 25/7 µm; polyester, PVDF, Beckrydure or Plastisol finishes.

SUCTION · PROFILE ONLY spans in m

LOAD daN/m ²	0.75	0.88	1.00
50	3.00	3.15	3.30
100	2.35	2.50	2.60
150	2.05	2.20	2.30
200	1.90	2.00	2.05

Under suction, the system span is the minimum of this profile span, the fixing in the sheet, the pull-out from the support, the stitching and the edge connections.

THICKNESSES AND WEIGHTS

THICKNESS	WEIGHT kg/m ²
0.75 mm	7.18
0.88 mm	8.43
1.00 mm	9.58

APPLICATIONS

- Flat or low-pitch roofs
- Industrial and logistics buildings
- PVC, TPO or bituminous waterproofing

Span validity range · supports

The spans in both tables apply to an end bearing of at least 40 mm and an internal bearing of at least 60 mm. For a narrower bearing, they do not apply without verification.

Local resistance at supports (web crippling under the support reaction) is not included in the table. It must be checked by the design office for the actual bearing width, especially at the intermediate support of continuous spans, where the reaction is highest.

STANDARD COLOURS polyester coating 25/7 µm · EN 10169

 RAL 1015 light ivory	 RAL 5012 light blue	 RAL 5019 capri blue	 RAL 6011 reseda green	 RAL 9002 grey white	 RAL 9006 white alu.	 RAL 9007 grey alu.	 RAL 9010 pure white
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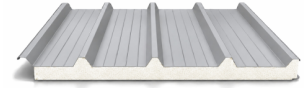
Reverse side 0742. Other RAL on request.

EFFECTIVE WIDTH 1 000 mm	THICKNESSES MM 0.75 · 0.88 · 1.00	RIB · PITCH MM 40 · 250	STEEL · EN 10346 S320GD+Z200
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INSULATED ROOFING · PUR CORE, PIR OPTIONAL

Sandwich panel Isotoit

The Isotoit panel combines thermal insulation, stiffness and fast installation: roofing and insulation are installed in a single lifting operation, for durable weathertightness and a uniform finish.



Integrated thermal insulation, PUR core (PIR optional) W/m·K · durable
weathertightness and fast single-operation installation · facings 0.40/0.40 or 0.50/0.50 mm, polyester coating 25/7 µm, RAL 9002.

MASSES AND THERMAL PERFORMANCE masses in kg/m² by facing · Rth in m²·K/W · U in W/m²·K

FOAM	0.40/0.40	0.50/0.50	RTH	U
30 mm	8.5	10.4	1.36	0.66
40 mm	8.9	10.8	1.82	0.51
50 mm	9.3	11.2	2.24	0.41
60 mm	9.7	11.6	2.73	0.35

ALLOWABLE LOADS IN DAN/M² test report 5644T22 · foam thickness in mm

SPAN m	PRESSURE · SINGLE SPAN				PRESSURE · MULTIPLE SPANS				SUCTION			
	30	40	50	60	30	40	50	60	30	40	50	60
1.40	285	315	360	425	310	340	390	460	285	315	440	528
1.60	250	280	320	380	275	310	350	420	255	285	390	468
1.80	210	235	270	320	255	285	330	390	220	245	340	408
2.00	170	190	220	260	200	225	260	305	180	200	275	330
2.20	140	155	180	210	170	190	220	255	150	165	230	276
2.40	115	130	150	175	140	160	185	215	125	140	195	234
2.60	95	105	120	140	120	130	150	175	100	110	155	186
2.80	80	90	105	125	100	110	130	155	90	100	140	168
3.00	60	65	75	90	80	85	100	120	65	70	100	120
3.40	35	40	45	55	45	50	60	70	45	50	70	84

Unfactored loads, foam thickness in mm, values from test report 5644T22. Facings 0.40 or 0.50 mm in S220GD or S250GD. Sealed through-fixing on Z purlins.

Configuration covered by the table, assumption to be confirmed. The table does not distinguish between build-ups: the source specifies neither the facing thickness of the test specimens (0.40/0.40 or 0.50/0.50 mm) nor the number of fasteners per purlin. Before applying it to a given facing or fastener density, have the test configuration confirmed against report 5644T22. Under suction, the system load remains limited by fastener resistance.

COLOURS polyester coating 25/7 µm


Standard colour RAL 9002 on both faces. Colour of choice from 5 000 m². Facing profile micro-ribbed (standard), micro-corrugated or flat.

EFFECTIVE WIDTH
1 000 mm

FOAM MM
30 · 40 · 50 · 60

FACINGS MM
**0.40/0.40 ·
0.50/0.50**

ÂME · MW/M·K
PUR · 0.0223

SINGLE-SKIN FAÇADE

Single-skin cladding 3.333.45

Profiled sheet for single-skin cladding: a light and rigid solution suited to all building types, fast and economical installation, wide range of colours.



Same profile as for roofing: the cladding uses the geometry and masses of the 3.333.45 · downward loads and local resistances page 03.

ALLOWABLE SPANS IN M wind pressure or suction · profile only

THICKNESS	50 DAN/M ²	100 DAN/M ²	150 DAN/M ²	200 DAN/M ²	250 DAN/M ²
0.63 mm	2.95	2.35	2.05	1.85	1.75
0.75 mm	3.20	2.50	2.20	2.00	1.85

Values for the profile only, applicable to both wind pressure and suction: fastener resistance and density must be checked separately according to the pull-out test report of the chosen system. Continuous spans and other configurations: please contact us.

THICKNESSES AND WEIGHTS

THICKNESS	WEIGHT kg/m ²
0.63 mm	6.03
0.75 mm	7.18

APPLICATIONS

- Industrial or agricultural façades
- Interior steel partitions
- Cladding and ventilated façades

STANDARD COLOURS polyester coating 25/7 µm · EN 10169

 RAL 1015 light ivory	 RAL 5012 light blue	 RAL 5019 capri blue	 RAL 6011 reseda green	 RAL 9002 grey white	 RAL 9006 white alu.	 RAL 9007 grey alu.	 RAL 9010 pure white
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Reverse side 0742. Other RAL on request.

EFFECTIVE WIDTH
1 000 mm

THICKNESSES MM
0.63 · 0.75

RIB · PITCH MM
45 · 333

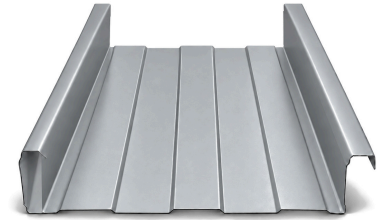
STEEL · EN 10346
S320GD+Z200

DOUBLE-SKIN CLADDING

Liner tray 400/70

Double-skin liner tray fitted horizontally between columns: it replaces the cladding girt, receives the rock wool and carries the outer skin.

Data sheet AS-FT-PLA-010, edition 08/2026 · design developed width 610 mm, straight envelope dimension 596 mm, returns 23 and 33 mm · single span, unfactored uniform load q normal to the cladding, in pressure as in suction, combination 1.50 q .



PRESSURE OR SUCTION NORMAL TO CLADDING single span · spans in m · thicknesses in mm

LOAD daN/m ²	DEFLECTION L/150			DEFLECTION L/200			DEFLECTION L/250			DEFLECTION L/300		
	0.75	0.88	1.00	0.75	0.88	1.00	0.75	0.88	1.00	0.75	0.88	1.00
60	3.80	4.10	4.30	3.45	3.70	3.95	3.20	3.45	3.65	3.00	3.25	3.45
70	3.60	3.90	4.10	3.30	3.50	3.75	3.05	3.25	3.45	2.85	3.05	3.25
80	3.45	3.70	3.95	3.15	3.35	3.55	2.90	3.10	3.30	2.75	2.95	3.10
100	3.20	3.45	3.65	2.90	3.10	3.30	2.70	2.90	3.05	2.55	2.75	2.90
120	3.00	3.25	3.45	2.75	2.95	3.10	2.55	2.75	2.90	2.40	2.55	2.70
150	2.75	3.00	3.20	2.55	2.75	2.90	2.35	2.55	2.70	2.20	2.40	2.50

The values use the governing inertia and resisting moment of both bending directions. The deflection criterion is chosen according to the outer facing selected: L/200 is the usual value for industrial cladding. Thickness 0.70 mm available: spans on request. Outer skin fixings and local support reaction remain to be checked at system level.

THICKNESSES AND WEIGHTS

THICKNESS	WEIGHT kg/m ²
0.70 mm	8.38
0.75 mm	8.98
0.88 mm	10.53
1.00 mm	11.97

DOUBLE-SKIN CLADDING BUILD-UP

PROPERTY	VALUE
Load-bearing tray	Fitted horizontally between columns, it resists wind and receives the insulation at the back of the tray
Insulation	Mineral wool rolled out in the liner tray, thickness as required for the target performance
Outer skin	Vertical profiled cladding fixed to the tray flanges, with thermal break if required

EFFECTIVE WIDTH
400 mm

THICKNESSES MM
0.70 to 1.00

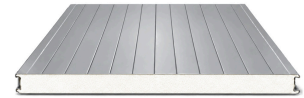
OVERALL HEIGHT
70 mm

STEEL · EN 10346
S320GD+Z200

INSULATED FAÇADE · EXPOSED OR CONCEALED FIXING

Sandwich panel Isomur

Double-skin sandwich panel for industrial, office and retail façades: high thermal insulation performance, complete weathertightness and two fixing methods, exposed or concealed.



Optimal thermal insulation, PUR core (PIR optional) W/m·K · fast installation and perfect sealing between panels · polyester coating 25/7 µm, 0.60/0.50 mm facing reserved for the concealed-screw version.

MASSES IN KG/M² by facing in mm

FOAM	0.40/0.40	0.50/0.50	0.60/0.50 concealed screws
30 mm	7.9	9.5	10.4
40 mm	8.3	9.9	10.8
50 mm	8.7	10.3	11.2
60 mm	9.1	10.7	11.6

THERMAL PERFORMANCE · SYSTEM

THICKNESS	RTH m ² ·K/W	U W/m ² ·K
30 mm	1.36	0.66
40 mm	1.82	0.51
50 mm	2.24	0.41
60 mm	2.73	0.35

ALLOWABLE LOADS IN DAN/M² · PRESSURE foam thickness in mm

SPAN m	30	40	50	60
1.40	210	240	285	355
1.50	165	195	230	280
1.60	140	160	190	235
1.80	100	110	135	170
2.00	75	80	95	125
2.20	55	60	75	95
2.40	35	45	50	60

Facings and fixing

Facings 0.40/0.40 and 0.50/0.50 mm available for all foam thicknesses.

The 0.60/0.50 mm facing is reserved for the concealed-screw version: the outer face carries the fixing.

APPLICATIONS

- Industrial and logistics façades
- Cold storage and commercial buildings
- Contemporary architectural cladding

Unfactored loads according to EN 1991-1-4, test report 5644T22. The 50 mm, not in the report, is interpolated between 40 and 60 and rounded down. **Assumption to be confirmed:** the source specifies neither the facings (0.40/0.40, 0.50/0.50 or 0.60/0.50 mm), nor the fixing method (exposed or concealed), nor the number of supports in the tests; to be confirmed by the test report before applying to a given configuration.

COLOURS polyester coating 25/7 µm

RAL 9002
grey white

Standard colour RAL 9002 on both faces. Colour of choice from 3 000 m². Facing profile micro-ribbed (standard), micro-corrugated or flat.

EFFECTIVE WIDTH
1 000 mm

FOAM MM
30 · 40 · 50 · 60

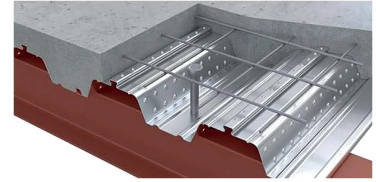
FACINGS MM
**0.40/0.40 ·
0.50/0.50 ·
0.60/0.50**

ÂME · MW/M·K
PUR · 0.0223

COMPOSITE STEEL-CONCRETE FLOOR

Composite floor deck

Ribbed profile with lateral embossments for composite slabs: it acts as self-supporting formwork during pouring, then as tensile reinforcement once the concrete has hardened. The void between ribs lightens the slab and saves the bottom reinforcement layer.



S320GD+Z200 steel to EN 10346, design yield strength $f_{y,p,k} = 290$ MPa · cold roll formed to NF EN 1993-1-3 and NF EN 1993-1-5 · formed from a 1 250 mm wide strip for 800 mm cover width · embossments on the inclined webs · pre-punched version on request, 60 × 40 mm slotted holes.

EFFECTIVE PROFILE PROPERTIES section in cm^2/m · I in cm^4/m · moduli in cm^3/m

THICKNESS mm	POSITIVE MOMENT				NEGATIVE MOMENT				RESISTANCES		
	A	I	I/VI	I/VS	A EFF	I	I/VI	I/VS	M+RK	M-RK	RW,K
0.80	9.55	53.86	18.32	17.66	8.46	43.96	13.26	16.40	2.22	1.67	33.40
1.00	12.06	68.04	23.14	22.30	10.69	55.53	16.75	20.71	2.81	2.11	42.20
1.20	14.58	82.22	27.96	26.95	13.36	69.42	20.94	25.89	3.40	2.64	51.00

A gross section, A eff effective section. Neutral axis: v_i 2.94 and v_s 3.05 cm under positive moment, v_i 3.315 and v_s 2.681 cm under negative moment. Nominal galvanised thicknesses; properties based on bare steel thickness 0.76 · 0.96 · 1.16 mm. Characteristic moments in $\text{kN}\cdot\text{m}/\text{m}$, based on the effective section (local buckling of thin walls, EN 1993-1-3), hence an $M/(I/v)$ ratio below $f_{y,p,k}$; characteristic support reaction $R_{w,k}$ in kN. Formwork spans page 10, installation page 11.

NOMINAL CONCRETE CONSUMPTION

SLAB cm	VOLUME l/m^2	CONCRETE daN/m^2
10	70	168
12	90	216
14	110	264
16	130	312
18	150	360
20	170	408

Concrete unit weight taken as 2 400 daN/m^3 . Add the sheet weight to obtain the floor self-weight.

THICKNESSES AND WEIGHTS

THICKNESS	WEIGHT kg/m^2
0.80 mm	9.81
1.00 mm	12.27
1.20 mm	14.72

MATERIAL AND PACKAGING

PROPERTY	VALUE
Steel grade	S320GD+Z200, EN 10346
Design	NF EN 1993-1-3 and 1-5
Yield strength $f_{y,p,k}$	290 MPa
Lengths	Based on layout plan, from 1.50 m
Pre-drilling	Slotted holes 60 × 40 mm
Feu	Fire performance depending on slab configuration and specific justification.

EFFECTIVE WIDTH
800 mm

THICKNESSES MM
0.80 · 1.00 · 1.20

RIB · SPACING
60 · 160 mm

STEEL · EN 10346
S320GD+Z200

COMPOSITE FLOOR DECK · DESIGN

Formwork spans

Spans of the sheet alone during pouring, in metres between supports. In the final stage, the span is set by the EN 1994-1-1 calculation note. Profile properties page 09, supports and installation page 11.

UNPROPPED FORMWORK STAGE construction load 100 daN/m² · spans in m

SLAB cm	SHEET 0.80 MM			SHEET 1.00 MM			SHEET 1.20 MM		
	2 SUPPORTS	3 SUPPORTS	4 AND +	2 SUPPORTS	3 SUPPORTS	4 AND +	2 SUPPORTS	3 SUPPORTS	4 AND +
10	3.10	2.70	2.90	3.50	3.00	3.30	3.80	3.35	3.65
12	2.85	2.50	2.70	3.20	2.80	3.05	3.55	3.10	3.40
14	2.65	2.30	2.55	3.00	2.60	2.85	3.30	2.90	3.20
16	2.50	2.20	2.40	2.85	2.45	2.70	3.10	2.75	3.00
18	2.40	2.05	2.25	2.70	2.30	2.55	2.95	2.60	2.85
20	2.25	1.95	2.15	2.55	2.20	2.45	2.80	2.45	2.70

UNPROPPED FORMWORK STAGE construction load 50 daN/m² · spans in m

SLAB cm	SHEET 0.80 MM			SHEET 1.00 MM			SHEET 1.20 MM		
	2 SUPPORTS	3 SUPPORTS	4 AND +	2 SUPPORTS	3 SUPPORTS	4 AND +	2 SUPPORTS	3 SUPPORTS	4 AND +
10	3.45	3.00	3.30	3.85	3.35	3.70	4.25	3.75	4.10
12	3.15	2.70	3.00	3.50	3.05	3.35	3.85	3.40	3.75
14	2.90	2.50	2.75	3.25	2.80	3.10	3.55	3.15	3.45
16	2.70	2.35	2.55	3.00	2.60	2.90	3.35	2.90	3.25
18	2.55	2.20	2.45	2.85	2.45	2.75	3.15	2.85	3.05
20	2.40	2.10	2.30	2.70	2.35	2.60	2.95	2.60	2.90

Design assumptions

Concrete B25 · ULS 1.35 P + 1.50 Q · SLS 1 P + 1 Q · reinforcing steel 500 MPa · deflection at pouring L/240 · active deflection in service L/350 · slenderness L/d 33 on two supports and 36 on three or four supports · spans rounded down in steps of 0.05 m. Beyond these spans, provide rows of props at least 80 mm wide to prevent punching of the sheet.

Indicative values, to be confirmed by the design office.

CONCRETE
B25

DEFLECTION AT POURING
L/240

DEFLECTION IN SERVICE
L/350

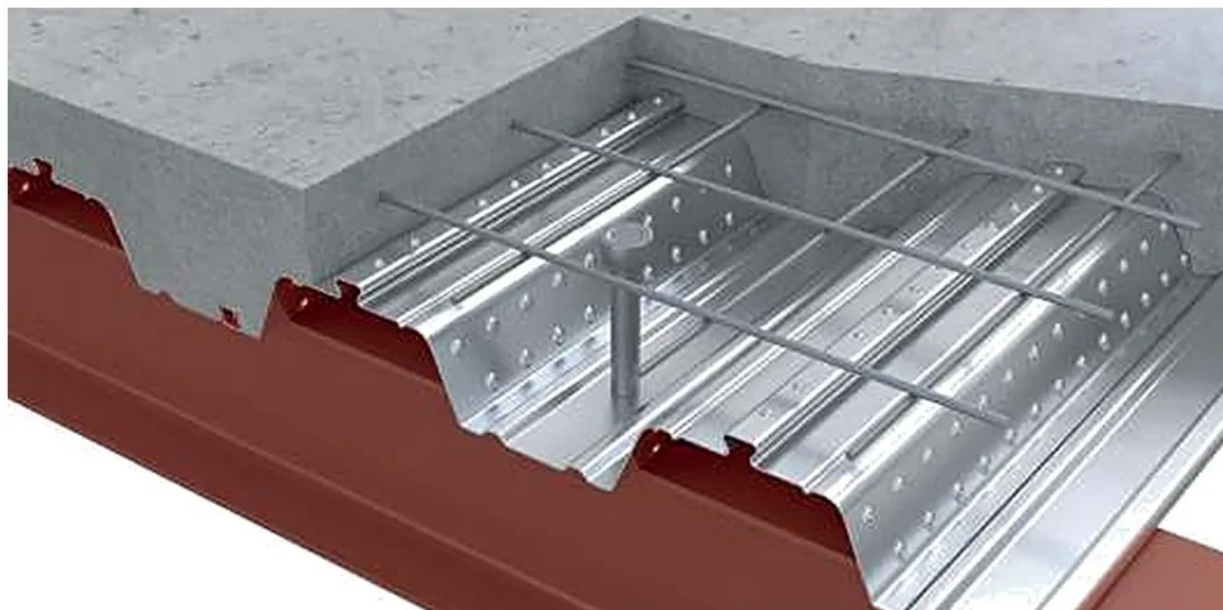
ROWS OF PROPS
80 mm

COMPOSITE FLOOR DECK · INSTALLATION

Installation guide

Supports, laps, reinforcement and openings: the six points that determine the performance of the formwork and the finished slab.

01 Supports and fixing 50 mm at end supports and 60 mm at intermediate supports, 70 mm on timber and masonry. Steel nails or self-tapping screws Ø 5.5 or 6.3 mm.	02 Overlap and stitching 40 mm minimum between sheets. Side laps stitched with 4.8 × 12 rivets or reduced -point self-drilling screws.	03 Reinforcement Welded mesh of 0.8 cm ² /m minimum in both directions. Top reinforcement over intermediate supports over 0.3 L on each side.
04 Openings Up to 500 × 500 mm, boxed out before pouring; the sheet is cut only after the concrete has set.	05 Mixed framing Bond through the embossments on the webs. If the slab acts compositely, weldable studs or nailed connectors.	06 Edges and fillers Upstands in folded galvanised sheet on steel framing, angles or timber formwork on concrete.


EFFECTIVE WIDTH
800 mm

THICKNESSES MM
0.80 · 1.00 · 1.20

END SUPPORT
50 mm

INTERMEDIATE SUPPORT
60 mm

Let's talk about your project.

THE 2026 COLLECTION

01 Structural steel and rolled sections

02 C+ and Z purlins

03 **Building envelope**

04 Plasterboard framing

05 Solar mounting systems

06 Pallet racking

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Calculation notes, installation drawings, non-standard designs: contact the sales department.