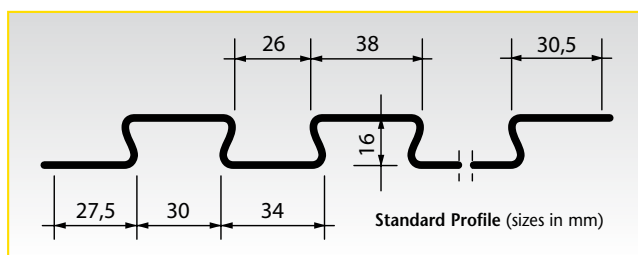


LEWIS®

DOVETAILED SHEETING

LEWIS® Dovetailed metal decking is a self-supporting, light gauge galvanised steel reinforcement sheet, used for shuttering and reinforcing lightweight concrete or screeded floors of limited thickness (50 mm). Used in a composite floor construction LEWIS® Dovetailed metal decking provides a first class solution for fire protection, acoustic issues and Under Floor Heating & Cooling within floors.



LEWIS® metal decking solutions can be used in a varied range of projects from renovation and conversions to traditional new build, timber frame, off-site system building, modular building systems and mezzanine floors.

Features

- Low dead weight (from approx. 0.9 kN/m²)
- Thin floor thickness (from 50 mm)
- High permissible load
- Spans (centre to centre) up to max. 2500 mm
- High Impact and airborne sound insulation
- Fire resistance up to 120 minutes
- Flexible system construction
- Durable due to use of high quality steel
- Sustainable and cost reducing solution



Load bearing capacity of LEWIS® floor slab with concrete strength class C20/25

Floor span (mm)	Floor thickness (mm)	Load bearing capacity (kN/m ²)	Concentrated load 50 x 50 mm (kN)**	
			Standard mesh Ø5 - 150 (Q131)*	
			Free edges	No free edges
600	50	30,5	3	5
900	50	19,5	3	5
1200	50	13,8	3	5
1500	50	9,7	3	5
2000	75	6,1	3	5
2500	75	4,1	3	5

* Standard mesh Ø5 - 150 (Q131) applied directly on the LEWIS® sheet

** For different concentrated loads please consult REPEL.

Fire resistance

A LEWIS® composite floor slab has a fire resistance of 60 minutes.

Depending on the floor span and the load on the LEWIS® composite floor additional reinforcement mesh is sometimes necessary.

Floor constructions with a fire resistance up to 120 minutes are possible.

Acoustics

To improve the acoustic characteristics of the LEWIS® floor system it is possible to create a floating LEWIS® floor by means of using SYLOMER TSS resilient strips under the LEWIS® Dovetailed metal sheeting.

The strips can be laid onto the floor boards (over the joists) or directly on the joists.

Load bearing capacity

The LEWIS® dovetailed profile has optimized geometry as a result of which the concerted action between the LEWIS® metal sheeting and the fine gravel concrete or liquid screed ensures the highest possible load-bearing capacity.



Reports & Certification

LEWIS® Dovetailed metal sheeting has been extensively tested. European test reports and test measurements are available. Test data includes a CE marking, Dutch KOMO quality certification, German Zulassung, French and Belgian Avis Techniques.

Technical details

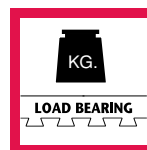
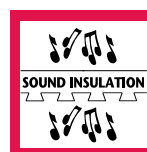
nominal width	:	630 mm
effective width	:	580 mm
standard lengths	:	1,220 mm 1,530 mm 1,830 mm 2,000 mm 2,500 mm
length range	:	800 - 6,000 mm
dimensional tolerances	:	length : 1-4 mm width : 1-3 mm
moment of inertia	:	$I_x = 3.6 \text{ cm}^4/\text{m}^1$
moment of resistance	:	$W_x = 3.0 \text{ cm}^3/\text{m}^1$
steel gauge	:	0.5 mm
height of profile	:	16 mm
flange width	:	38/34 mm
weight	:	0.058 kN/m ²

minimum 'fine grade' concrete thickness:
16 mm profile height + 34 = 50 mm. For composition and quality of concrete see separate application instructions.

Steel quality: S320GD + Z275/Z100 N-A-C according to NEN-EN10147



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Dordrecht, The Netherlands • www.reppel.nl



- P.O.Box 102
- 3300 AC Dordrecht,
- The Netherlands
- Telefoon : +31 78 617 44 00
- Fax : +31 78 617 10 06
- E-mail : reppel@reppel.nl
- Website : www.reppel.nl