

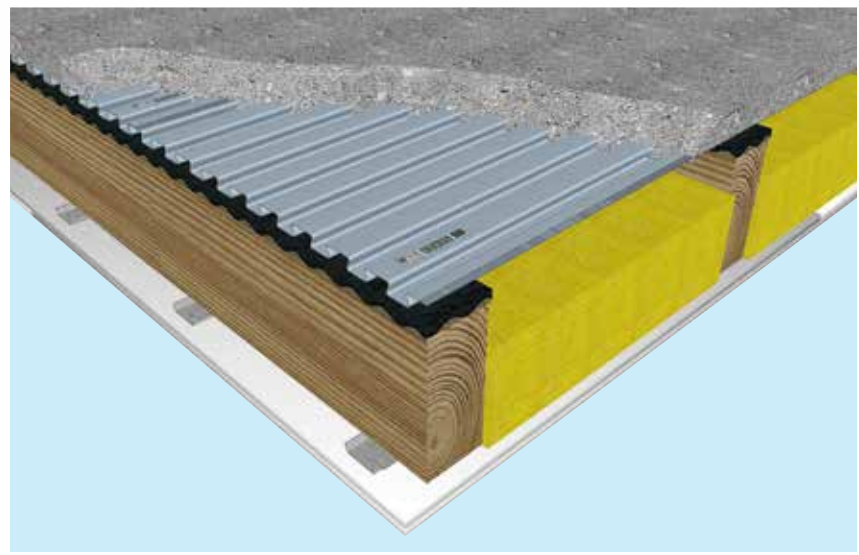
# LEWIS® ON CDM MTA RESILIENT STRIPS

## LEWIS®

LEWIS® Dovetailed metal decking is used as reinforcement and formwork in thin concrete floors that are placed on wooden beam layers and light steel structures. The sheeting is finished with a thin layer of fine grade aggregate concrete or a screed. The composite action between LEWIS® Dovetailed metal decking and the concrete/screed ensures a rock-solid LEWIS® floor.

### Common applications for LEWIS® Dovetailed sheeting

- on existing timber joists or steel beam constructions
- partition floors
- floor upgrading when building functions are changed
- floor constructions in timber frame construction (TF)
- floor constructions in light steel frame (LSF) construction systems



The LEWIS® CDM MTA strips are available in types MTA 5 and MTA 15/7.

### MTA 5 strips

MTA 5 has a thickness of just 5 mm and is ideal for suspended LEWIS® floors where a high acoustic performance is needed with an extremely low installation height.

This material is mainly used for acoustic LEWIS® floors in light steel frame construction. Because the material is very thin, MTA 5 is not suitable for use on wooden floor boards. The MTA 5 strip is 80 mm wide and is supplied on roll lengths of 10 m.

### MTA 15/7 strips

MTA 15/7 is a 15 mm-thick special waved rubber granulate that is used for suspended LEWIS® floors on (existing) timber

joists or steel beams where very high impact sound insulation must be realised.

The MTA 15/7 strip is 98 mm wide and is supplied on roll lengths of 5 m.

Successful acoustic tests have been carried out in cooperation with the University of Eindhoven and Level Acoustics & Vibration on LEWIS® acoustic floor constructions featuring LEWIS® CDM MTA resilient strips.

### Features of LEWIS® CDM MTA

- permanent elastic behaviour
- extremely low creep
- recycled material
- suitable for high load bearing performance requirements
- highly stable material



### CDM MTA strips

The MTA strips have been developed by CDM, which is a leading global specialist in acoustics. The strips are made from high-grade SBR granulate rubber with PU-bound elastomer. The rubber granulate has been recycled from used car tyres.

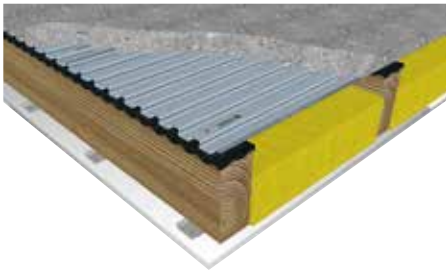
One of the advantages of LEWIS® CDM MTA rubber granulate strips is that the material can also be used for high loads and at long centre-to-centre distances from the supporting structure.

Type MTA	Density*	Max. stat. Loading	Max. time Loading	Creep**	Resonance frequency	Compression	C <sub>dyn</sub> ***
MTA 5	710 kg/m <sup>3</sup>	0,3 Mpa	3 Mpa	1 % H/DEC	60 Hz	< 1,5 mm	35 MN/m <sup>3</sup>
MTA 15/7	710 kg/m <sup>3</sup>	0,15 Mpa	2 Mpa	0,8 % H/DEC	25 - 30 Hz	< 5 mm	13 MN/m <sup>3</sup>

(\*)ISO 845 - (\*\*)ISO 8013, at 0.091 MPa - (\*\*\*)EN 29052-1

## LEWIS® acoustic floors

Timber joists with MTA 15/7



LEWIS® Deck 50 mm (107 kg/m<sup>2</sup>)  
 CDM MTA 15/7 15 x 98 mm  
 Timber joists c.t.c. 600 mm 200 x 100 mm  
 Mineral wool 140 mm  
 Spring stirrups 27 mm  
 Gypsum board 2 x 12,5 mm

### Airborne sound

R<sub>w</sub> (C<sub>100-3150</sub>, C<sub>tr 100-3150</sub>) 68 (-2,-6) dB

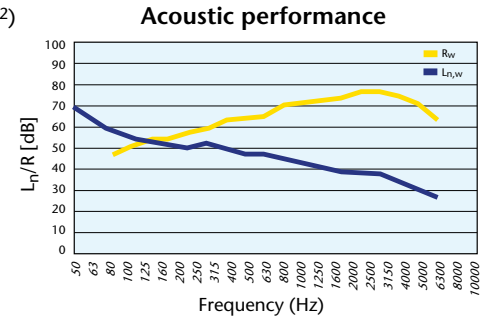
D<sub>nT,w</sub> + C<sub>tr</sub> 58 dB

D<sub>nT,w</sub> 64 dB

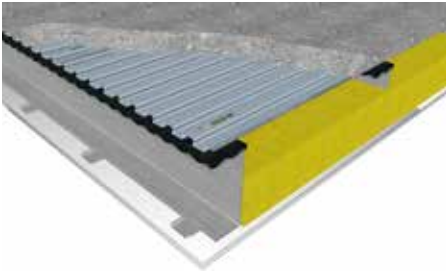
### Impact sound

L<sub>n,w</sub> (C<sub>1 100-2500</sub>, C<sub>1 50-2500</sub>) 48 (-1,7) dB

L<sub>nT,w</sub> 52 dB



Light Steel Framing with MTA 15/7



LEWIS® Deck 50 mm (107 kg/m<sup>2</sup>)  
 CDM MTA 15/7 15 x 98 mm  
 Timber joists c.t.c. 600 mm 200 x 80 mm  
 Mineral wool 140 mm  
 Spring stirrups 27 mm  
 Gypsum board 2 x 12,5 mm

### Airborne sound

R<sub>w</sub> (C<sub>100-3150</sub>, C<sub>tr 100-3150</sub>) 70 (-3,-9) dB

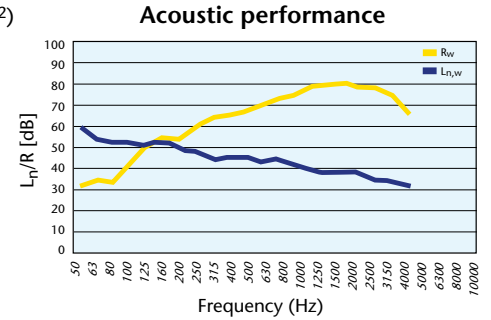
D<sub>nT,w</sub> + C<sub>tr</sub> 57 dB

D<sub>nT,w</sub> 66 dB

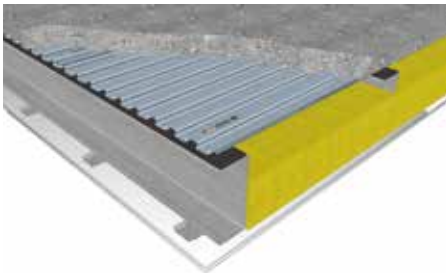
### Impact sound

L<sub>n,w</sub> (C<sub>1 100-2500</sub>, C<sub>1 50-2500</sub>) 48 (-3, 0) dB

L<sub>nT,w</sub> 52 dB



Light Steel Framing with MTA 5



LEWIS® Deck 50 mm (107 kg/m<sup>2</sup>)  
 CDM MTA 5 5 x 80 mm  
 Timber joists c.t.c. 600 mm 200 x 80 mm  
 Mineral wool 140 mm  
 Spring stirrups 27 mm  
 Gypsum board 2 x 12,5 mm

### Airborne sound

R<sub>w</sub> (C<sub>100-3150</sub>, C<sub>tr 100-3150</sub>) 69 (-2,-8) dB

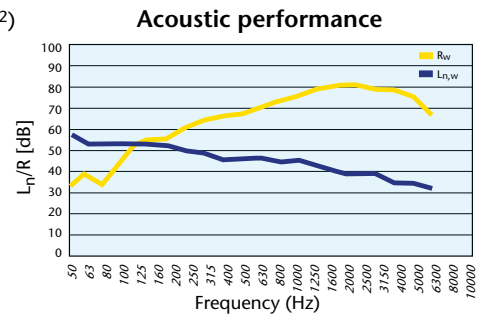
D<sub>nT,w</sub> + C<sub>tr</sub> 57 dB

D<sub>nT,w</sub> 65 dB

### Impact sound

L<sub>n,w</sub> (C<sub>1 100-2500</sub>, C<sub>1 50-2500</sub>) 54 (-6,-4) dB

L<sub>nT,w</sub> 58 dB



LEWIS® floor thickness of 60 to 65 mm helps to improve the specified airborne and impact sound insulation by approx. 1 dB. Contact us for technical advice in case of beams with centre distances > 1200 mm and/or for distributed floor loads > 2.5 kN/m<sup>2</sup>.

### Requirements acoustic separating floor

New build	Airborne sound	Impact sound
England & Wales	D <sub>nT,w</sub> + C <sub>tr</sub> ≥ 45 dB	L <sub>nT,w</sub> ≤ 62 dB
Scotland	D <sub>nT,w</sub> ≥ 56 dB	L <sub>nT,w</sub> ≤ 56 dB
Ireland	D <sub>nT,w</sub> ≥ 53 dB	L <sub>nT,w</sub> ≤ 62 dB
Conversion / change of use		
England & Wales	D <sub>nT,w</sub> + C <sub>tr</sub> ≥ 43 dB	L <sub>nT,w</sub> ≤ 64 dB
Scotland	D <sub>nT,w</sub> ≥ 53 dB	L <sub>nT,w</sub> ≤ 58 dB

### Floor advice

A LEWIS® floor can serve as a suitable floor solution for just about any project. The specialists at REPPel will use acoustic specifications and other project related building requirements to find the ideal LEWIS® floor construction. Please feel free to contact us for technical advice.



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