

TATA STEEL



The ComFlor® range at a glance
Steel composite floor decks



The ComFlor® range at a glance

Steel composite floor decks

Manufactured in the UK and readily available, Tata Steel's ComFlor® offers the most extensive, cost-effective and efficient range of composite floor deck profiles in Europe. Our range of seven unique profiles enable effective and efficient design, each intended specifically for a particular application area providing optimum composite floor deck performance.

ComFlor® composite floor deck range

- Fast build time provided by quick installation and prop free concrete floors.
- High levels of fire resistance from all ComFlor® slabs with zero soffit protection.
- Colorcoat FD® pre-finished steel soffits offer significant extra protection and corrosion resistance.
- Full traceability of all components.
- Certified 'Very Good' to BREs responsible sourcing standard BES 6001 to maximised points in BREEAM.
- Covers unpropped construction from 2.5m to 4.5m.

ComFlor® deep deck range

- Long spanning capability between beams.
- Used with integrated beams (Slimdek®, Slimflor® and others) where the deck lands on an extended lower flange, giving reduced overall floor height.
- Services incorporated into profile zone, providing cost-effective, minimal depth floor construction.
- Low vibration design to meet the most stringent vibration requirements.
- Excellent fire ratings.
- Typical unpropped spans up to 6m, and propped spans to 9m.

The ComFlor® range

From 46mm to 225mm deep

- ComFlor® composite floor deck acts as a working platform.
- Act as a permanent formwork for the concrete slab.
- Provides fully integrated composite action between steel deck and slab.
- Allows composite action between the steel beam and slab via shear studs.



ComFlor® 46

Classic composite flooring profile, easily transported, simple and efficient.

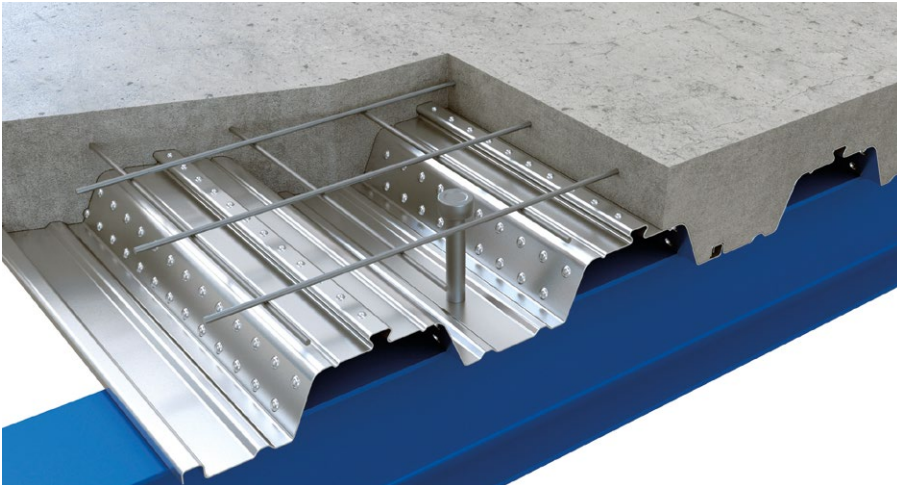
- Nestable. The simple trapezoidal shape neatly fits one profile into another, allowing more square metres per bundle.
- Low transport cost. Results in reduced environmental impact and in less crane time.
- Fast laying.
- Economic.



ComFlor® 51+

Contemporary new design of the original British re-entrant profile.

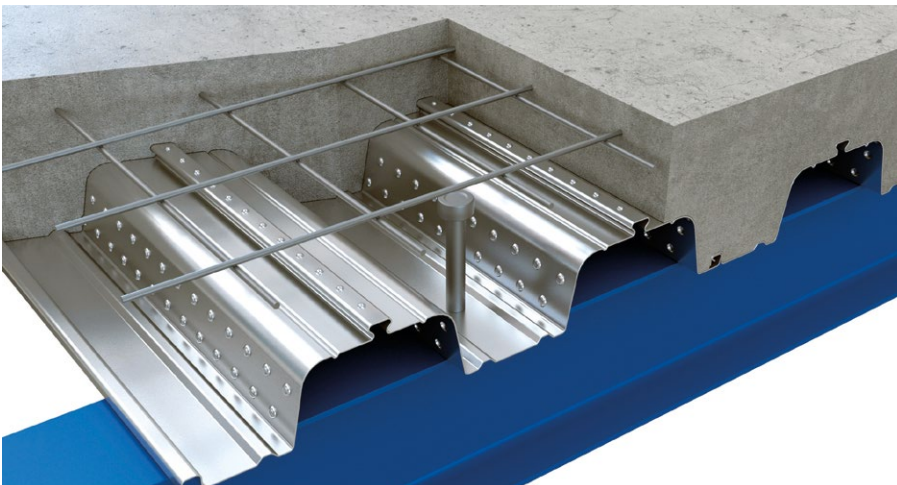
- Virtually flat soffit for a clean aesthetic appeal.
- Composite performance – floor slab. New embossments give even better shear key.
- Composite performance – beam. Due to effective shear stud performance.
- Fire and acoustic performance.
- Easy attachment for services.



ComFlor® 60

Most successful new generation combined trapezoidal and re-entrant 60mm profile.

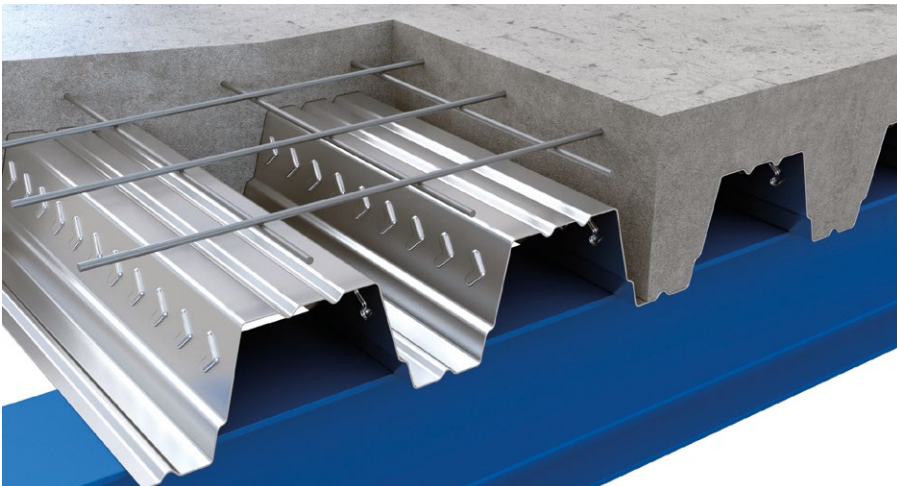
- Versatile. Combined round shouldered profile gives excellent span capability with straightforward service attachment.
- Low concrete and steel usage.
- Central stud placement.
- Closed ends.
- Available in Colorcoat FD® pre-finished steel to the soffit.
- 600mm cover, as recommended by Health and Safety guidelines.



ComFlor® 80

Combined trapezoidal and re-entrant 80mm composite profile with long span capability.

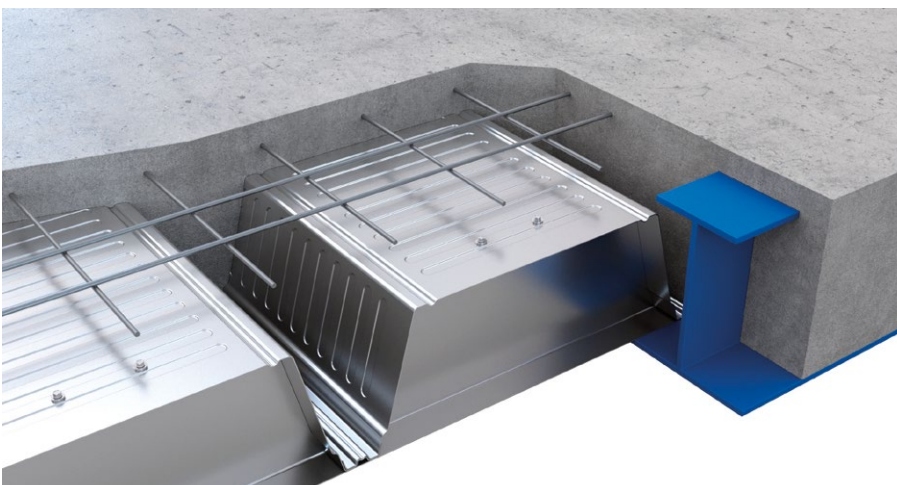
- Versatile. Combined profile allows easy service attachment, with trapezoidal spanning ability.
- Reduces the number of secondary beams.
- Central stud placement.
- Available in Colorcoat FD® pre-finished steel to the soffit.
- 600mm cover, as recommended by Health and Safety guidelines.



ComFlor® 100

Strong long span composite profile for non-composite beams.

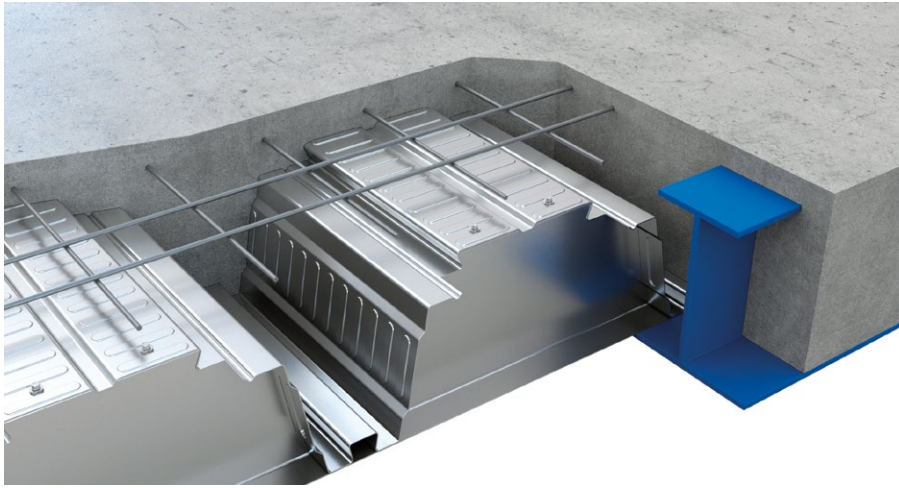
- Long span strength reduces or eliminates temporary propping.
- Fast laying.
- Suitable for use with concrete beams or non-composite steel beams.
- Nestable profile gives low transport and handling costs.



ComFlor® 210

The original deep ultra long span composite profile introduced for the first Slimflor® systems.

- Efficient. Cross stiffener technology and deep profile shape provides a very efficient metal deck and composite slab.
- Especially suited to bear on the extended lower flange of a steel beam, can also be used on the top flange.
- Nestable profile gives low transport and handling costs.



ComFlor® 225

High performance deep deck specifically designed for Slimdek® and all other integrated steel beam systems.

- Optimised profile design gives superb span capability and composite performance.
- Enables all the benefits of Slimdek® type systems. Including 6m unpropped spans, big open area and slimmer floor zone.
- Easy service attachment and integration.
- Provides reduced overall floor height with fewer steel beams which enables an extra floor every eight floors.

ComFlor® application

The ComFlor® range offers many benefits including speed of installation, long spanning capabilities, lightweight buildings, excellent fire resistance, all responsibly sourced and certified to BES 6001.

ComFlor® with Colorcoat FD® 170

ComFlor® 60 and ComFlor® 80 are available with Colorcoat FD® 170 pre-finished steel, ideal for car parks, the underside of ComFlor® Active floors or any exposed soffit.

Colorcoat FD® 170 pre-finished steel is a tough satin embossed plastisol coating 170 microns thick with an aesthetic guarantee of up to 25 years and a design life of 50 years.

It provides significant additional protection to exposed soffits in both internal and external environments, with project specific guarantees available for both inland and coastal projects.

ComFlor® Active

ComFlor® Active is an innovative approach that permits circulation of cool or warm water through a network of water pipes embedded into the concrete to thermally activate the floor. This method provides highly effective cooling for office buildings and similar heating benefits in residential structures.

In both cases, the low temperature differential between the room temperature and the circulated water allows the use of low carbon technologies, rather than traditional carbon intensive heaters or chillers, to supply water at the required temperature. The low water temperature also reduces heat

losses from the intermediate pipe-work and increases the system's overall efficiency.

Thermally activated traditional concrete slab floors provide a high comfort level, reduce the need for radiators and provide a self-regulating, energy-efficient system offering cooling and heating in a single package.

ComFlor® Active offers all these advantages, with some key extra features. Benefits include a large radiant surface to maximise output and optional Colorcoat FD® 170 pre-finished steel to further improve performance and offer an aesthetically appealing finish.



... more on ComFlor®

ComFlor® is specifically designed for rapid installation of flooring and to facilitate lower mass buildings with long clear span composite concrete floors. Large areas of ComFlor® can be easily craned into position and in excess of 400m² laid by one team per day. With minimal mesh or fibre reinforcement and pumped concrete, the completed floor can quickly follow.



Professional support

Our dedicated structural team are available to provide support and advice on the best product for your project, and are on hand to help with:

- Design calculations (project specific).
- Software tools.
- Acoustic design.
- Vibration.
- Fire design.
- Slab penetrations and installation details.
- EPD – Environmental Performance Declaration.
- In-house CPD Seminars.

Tata Steel maintains a friendly technical help desk which is freely available to all Consulting Engineers and Contractors to assist with composite flooring design issues.

T: 01244 892199

E: technical.structuralproducts@tatasteel.com

ComFlor® 9 software

Comprehensive ComFlor® 9 software for the design of composite floor slabs is freely available, to all professionals who register, at www.tatasteelconstruction.com/Comflor

The software analyses each of the ComFlor® composite floor decks in construction stage, service stage and for fire resistance, under a wide range of loading configurations.

BIM (Building Information Modelling)

Technical details and drawings relating to ComFlor® products are available in BIM ready format and may all be accessed from our website, www.tatasteelconstruction.com by following the relevant links.

www.tatasteelconstruction.com

Trademarks of Tata Steel UK Limited

Colorcoat FD, ComFlor, Slimdek and Slimflor are trademarks of Tata Steel UK Limited

While care has been taken to ensure that the information contained in this publication is accurate, neither Tata Steel, nor its subsidiaries, accept responsibility or liability for errors or for information which is found to be misleading.

Before using products or services supplied or manufactured by Tata Steel and its subsidiaries, customers should satisfy themselves as to their suitability.

Copyright 2017

Tata Steel UK Limited

Tata Steel

Shotton

Deeside

Flintshire

CH5 2NH

United Kingdom

T: +44 (0) 1244 892199

E: technical.structuralproducts@tatasteel.com

Tata Steel, Registered Office: 30 Millbank London SW1P 4WY, Registered in England No. 2280000

UK1217