

TATA STEEL



Durbar®

Hot-rolled floor plate – only by Tata Steel



THERE IS PATTERNED STEEL FLOOR PLATE - AND THERE IS DURBAR

Durbar is hot-rolled structural steel floor plate with a distinctive, evenly distributed raised stud pattern - only by Tata Steel.

Outstanding slip resistance

Slips and trips are the most common cause of injuries at work. Durbar's unique pattern of raised studs has been proven, by external laboratory testing, to provide outstanding resistance to slip, in both dry and wet conditions.

Fire resistance

Durbar's structural properties mean that you can rely on it to perform, even when subjected to extreme heat. At temperatures where aluminium floor plates have begun to melt, Durbar steel floor plate will still be supporting design loads.

Saving you money

Durbar's structural properties reduce cost by eliminating the need for separate structural and flooring components – a distinct advantage over other materials, such as aluminium.



Easy to clean, self-draining surface

Durbar's evenly distributed, raised stud pattern creates a self-draining surface which is easy to clean. The process of producing Durbar even produces an abrasion-resistant surface, giving it a long service life.

A sustainable choice

Durbar is produced in the UK to the highest standards, including BES 6001 for responsible sourcing which guarantees the integrity of the supply chain.

Totally recyclable

As with all steel, Durbar is 100% recyclable at the end of its life and by using genuine Durbar, you can be assured of a perfect match to existing installations, helping to extend serviceable life.

Quality, choice and availability

Durbar is certified to ISO TS 16949:2009 and meets the requirements of the Construction Products Directive. It is available in three different structural grades to fit your needs. Durbar is supplied via an extensive UK network of in-house and partner distributors.



OUTSTANDING PROVEN SLIP RESISTANCE

Unique self-draining stud pattern provides a slip-resistant surface.

Keeping you safe

According to the UK Health and Safety Executive (HSE), over a third of all major injuries reported in the UK each year are caused as a result of a slip or trip¹. That amounts to 172,000 injuries to workers every year, not counting injuries to the general public.

Products that contribute to safer passage over surfaces, can reduce the risk of slips and trips, whether in permanent conditions, such as in factories, or temporary conditions, such as construction, building and planned maintenance.

The dense pattern of studs on Durbar creates a slip-resistant surface at all angles and allows plates to be used in any direction. Durbar has a unique diamond pattern which, on average, is 23% deeper and has 10% more studs than other generic steel floor plates.

Durbar Comparative Performance

Item	Potential for slip when dry	Potential for slip when wet
Durbar	Extremely Low	Low
Generic type 'T' floor plate	Low	Low
Generic type 'A' floor plate	Low	Low

Tested and trusted

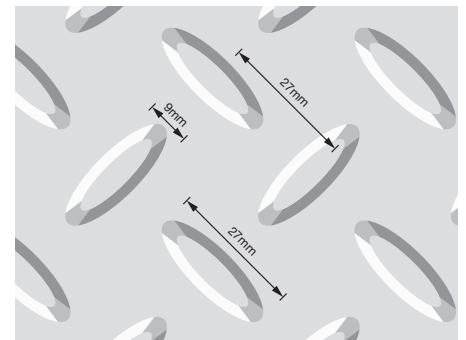
In recent independent tests carried out on genuine Durbar floor plate, slip resistance was found to be consistently good, in both dry and wet conditions.

The UK HSE and the influential UK Slip Resistance Group (UKSRG) recommend the use of a pendulum test to measure the slip resistance of flooring products. This test is according to EN 13036-4. The pendulum test measures the dynamic coefficient of friction and is designed to replicate a pedestrian heel strike. This has been found to best simulate the most common cause of slips.

Independent tests on genuine Durbar using the pendulum tester according to EN 13036-4 have shown consistently good results in both wet and dry conditions². The measured pendulum test value (PTV) in the wet condition of 46 represents a 'Low' slip potential, according to UKSRG guidelines, while in the dry condition, a PTV of 73 provides a classification of 'Extremely low' slip potential.

Comparative tests on generic floor plate adopting either 'T' or 'A' patterns have shown that the unique pattern of studs on genuine Durbar results in the lowest allround slip potential.

The actual slip resistance of Durbar or any other floor plate will depend on real-life application and the environment in which it is used. Galvanising, painting or coating Durbar can influence the slip resistance.



Stud depth: 1.5 – 2.2 mm
The dimensions in the above image are approximate

Pendulum test comparison

The table below, taken from UKSRG guidance, represents the risk category for a reasonably active pedestrian aged between 18 and 60, walking in a straight line on a level surface.

Slip Resistance Designation

Pendulum value	Potential for slip
0 - 24	High
25 - 35	Moderate
36 - 64	Low
65+	Extremely Low

1. UK Health & Safety Executive Statistics, 2017/18 ; non-fatal injuries to workers according to self-reported estimates from the Labour Force Survey

2. External laboratory results performed according to BS EN13036-4 BS7976 / UK Slip Resistance Group guidelines, Wessex Precision Instruments Ltd, July 2019



DURBAR... AGAIN AND AGAIN

We offer a choice of Durbar floor plate to meet your needs.

Typical applications

- Stairs and walkways
- Bridges
- Steps and safety platforms
- Cladding and protective barriers
- Commercial vehicles
- Containers
- Lifts
- Shipbuilding
- Offshore installations

The iconic pattern of Durbar also provides an attractive option for outstanding architectural aesthetics.

Readily available and easy to process

We supply Durbar in both coil and sheet form. The consistent quality of Durbar offers reliable, repeatable processing. It can be readily cut, bent and welded using normal procedures.

We supply sheet through an extensive network of distributors throughout the UK, all decoiled at our facilities in Llanwern.

Decoiled Durbar sheet from Tata Steel benefits from a high quality surface finish and excellent flatness due to the class-leading brushing and flattening capability of our decoiling facility.

A sustainable choice

Durbar has been a market leading floor plate in the UK for over 50 years. New Durbar is an exact match with existing installations, enabling concern-free refurbishment.

Durbar is exclusively manufactured at Tata Steel's Port Talbot site which is certified for responsible sourcing to BES6001 for the manufacture of hot-rolled coil.

It can be easily reused and is 100% recyclable at the end of its useful life. Durbar can be galvanised or painted for additional corrosion resistance.



Technical specifications

Floor plate with structural integrity

Durbar is Tata Steel's range of hot-rolled structural steel floor plate.

Extensively tested and proven, Durbar's structural properties reduce construction costs by eliminating the need for separate structural and flooring components. Versatile and durable, Durbar is manufactured with a distinctive raised stud pattern for slip resistance.

We have been producing Durbar to the highest quality standards for more than 50 years. Durbar is produced under quality standard ISO TS 16949:2009 and meets the requirements of the Construction Products Directive (CPD).

Mechanical properties

	Min. yield strength ReL (N/mm ²)	Min.-max tensile strength Rm (N/mm ²)	Min. elongation after fracture A (%)	Impact test	
				Temp °C	Min energy J
			$L_0 = 5.65\sqrt{S_0}$ $3 \leq t \leq 12.5$		
S235JR+AR	235	360-510	24	20	27
S275JR+AR	275	410-560	21	20	27
S355JR+AR	355	470-630	20	20	27

Notes:

- Lower yield strength or 0.2% proof stress applies.
- Material thickness (t) in millimetres.
- Impact properties of quality JR products are verified only when specified at the time of the enquiry and order.
- Impact strengths apply to $t \geq 6$ mm and are for standard test pieces only

Chemical composition

	C	Mn	P	S	Si	N
	Max	Max	Max	Max	Max	Max
S235JR+AR	0.17	1.40	0.035	0.035	-	0.012
S275JR+AR	0.21	1.50	0.035	0.035	-	0.012
S355JR+AR	0.24	1.60	0.035	0.035	0.55	0.012

Values are in weight percentages

Certification

Durbar is supplied as standard with a full 3.1 test certificate.

Weights

Thickness	Weight (kg/m ²)
3.00	26.83
4.50	38.59
6.00	50.36
8.00	66.04
10.00	81.73
12.50	101.34

Note: These are typical weights; actual weights will vary owing to stud height and positive width tolerances.

Dimensional window

Standard thickness (mm)	Standard widths (mm)
3.00	1000 -1250
4.50	1000 -1500
6.00	1000 -1500
8.00	1000 -1500
10.00	1000 -1500
12.50	1000 -1500

Notes:

- Standard cut lengths are twice the widths shown, e.g. the standard cut length of 1000mm wide Durbar is 2000mm. Please refer to Tata Steel or your local sales representative for other dimensions.
- The thickness of Durbar is that of the plain plate, exclusive of the raised pattern. The studs in the pattern are typically between 1.5 and 2.2mm height.

Tolerances on thickness

Thickness tolerances as per EN10051:2010.

CE marking

Durbar is CE marked and is fully compliant with the Construction Products Regulation.

Product support

We want you to get the best from our products. Our technical engineers and trained sales staff are always happy to answer your questions on steel selection and application of Durbar.

Further design guidance is provided on our website and our engineers are available to assist you with making the most of Durbar.

www.tatasteeleurope.com

Trademarks of Tata Steel

Durbar is a registered trademark of Tata Steel.

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 2019
Tata Steel Europe Limited

Tata Steel

A11 East
Llanwern Works; Newport
NP19 4QZ
United Kingdom
T: +44 (0) 1633 472 028
E: connect.durbar@tatasteeleurope.com

Tata Steel Europe Limited is registered in England under number 05957565 with registered office at 30 Millbank, London SW1P 4WY, United Kingdom.

ENG:EN:PDF:1019