TATA STEEL

TATA

S235JR+AR

Strong and robust floor plate offering a range of benefits including scope to reduce construction costs

Floor plate with structural integrity

Durbar® S235JR+AR is part of 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 40 years. Durbar is certified to ISO TS 16949:2009 and meets the requirements of the Construction Products Directive.

Tested for slip resistance

Durbar has been tested and assessed for slip potential. Its pattern of studs creates a slip-resistant surface at all angles and allows plates to be used in any direction. Wessex Test Equipment Limited, an independent research establishment, tested Durbar both wet (clean water) and dry in accordance with the standard and guidelines shown below and assessed its potential for slip as extremely low for the dry samples and low for the wet samples[1]. Testing was conducted on uncoated Durbar under laboratory conditions. The actual slip-resistance of Durbar will depend upon the real-life application and the environment in which it is used. Galvanising, painting or coating Durbar can influence its slip resistance.

	Plate ID	Sample reference	Pendulum test value (WET)
Durbar floor plate	H 306 21 010	1, 2, 3, 4	47, 47, 47, 47
	H 306 20 010	1, 2, 3, 4	42, 46, 42, 48

UK Slip Resistance Group Guidelines (issue 4, 2011)

The potential for slip value reported applies in the instance of access by able-bodied pedestrians.

- High slip potential 0-24
- Medium slip potential 25-35
- Low slip potential 36-64
- Extremely low slip potential 65+

The results show that under water wet conditions or other similar contaminants the majority of those floor areas tested exhibit a low potential for slip.

[1] BS 7976-2:2002 Pendulum Testers scope for use in the determination of slip/skid resistance of surfaces

Mechanical properties

	Min. yield strength R_{eL} (N/mm²)	Min.-max tensile strength R_m (N/mm²)	Min. elongation after fracture A (%)	Impact test	
			$L_0 = 5.65\sqrt{S_0}$ $3 \leq t \leq 12.5$	Temp °C	Min energy J
S235JR+AR	235	360-510	24	20	27

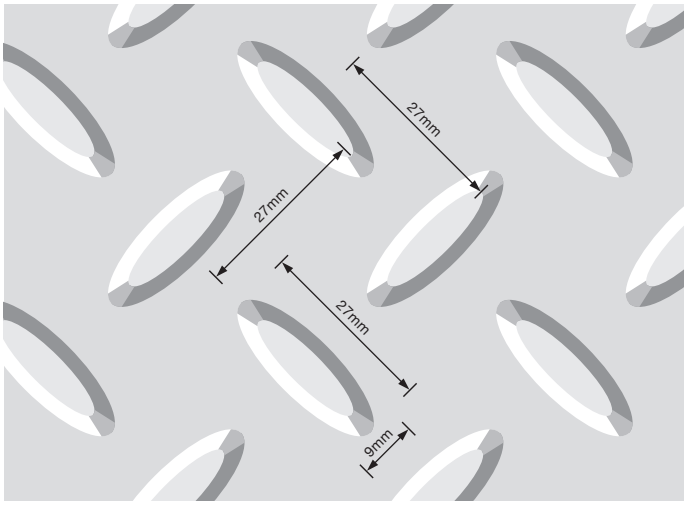
Notes:

1. Lower yield strength or 0.2% proof stress applies.
2. Material thickness (t) in millimetres.
3. Impact properties of quality JR products are verified only when specified at the time of the enquiry and order.
4. Impact strengths apply to thicknesses ≥ 6mm 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

Values are in weight percentages



The dimensions in the image above are approximate.

Dimensional window of S235JR+AR

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:

1. Standard cut lengths are twice the widths shown, e.g. the length of 1000mm wide Durbar is 2000mm. Please refer to Tata Steel or your local sales representative for other dimensions.
2. 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.

Weight per unit area

Thickness (mm)	**Weight (kg/m²)**
	All grades
3.00	27
4.50	39
6.00	50
8.00	66
10.00	82
12.50	101

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

Tolerances on thickness

Thickness tolerances as per EN 10051:2010.

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