

Install® Plus: Technical delivery conditions

S235GT multi-certified, hot-finished tube

Install® Plus multi-certified, hot-finished tube has been specifically developed to satisfy a wider range of building, engineering and industrial pipework applications.

Maximum flexibility

Tata Steel now satisfy the requirements of the new EN10255 S235GT grade, as well as EN10217-2 P235GH and many other applicable standards.

This provides maximum flexibility in meeting a wider range of customer pipework

requirements (please refer to the relevant technical datasheet for full details).

Many advantages

- Hot-finished for consistent mechanical performance and improved ductility.
- Suitable for welding, threading, bending, grooving or flaring.

Install® Plus is the perfect replacement for BS1387, which is now a withdrawn, unsupported standard that does not allow CE marking or satisfy the Construction Products Regulations (CPR).

- Suitable from -20 to 300°C.
- CPR-CE marked CAT3 & 4.
- New Tata Steel red paint for enhanced corrosion protection.
- Covers a wider range of applicable industrial standards.

Table 1

Summary of chemical composition (ladle analysis) and mechanical properties

Steel Grade	Chemical Composition %				Mechanical Properties		
Steel Name	C max	Mn max	P max	S max	Upper Yield Strength R _{eH} min (MPa)	Tensile Strength R _m (MPa)	Elongation A min %
S235GT/P235GH	0.16	1.2	0.025	0.020	235	360 to 500	27

Table 2

Install® Plus tube data

OD	Nominal bore		Outside diameter		Wall thickness	Heavy weight		Medium weight		
						Weight per metre		Wall thickness	Weight per metre	
	NB		Max (mm)	Min (mm)	T	Plain end/ grooved tube	Screwed & socketed	T	Plain end/ grooved tube	Screwed & socketed
	(mm)	(inch)			(mm)	(kg/m)	(kg/m)	(mm)	(kg/m)	(kg/m)
21.3	15	½	21.8	21.0	3.2	1.44	1.45	2.6	1.21	1.22
26.9	20	¾	27.3	26.5	3.2	1.87	1.88	2.6	1.56	1.57
33.7	25	1	34.2	33.3	4.0	2.93	2.95	3.2	2.41	2.43
42.4	32	1¼	42.9	42.0	4.0	3.79	3.82	3.2	3.10	3.13
48.3	40	1½	48.8	47.9	4.0	4.37	4.41	3.2	3.56	3.60
60.3	50	2	60.8	59.7	4.5	6.19	6.26	3.6	5.03	5.10
76.1	65	2½	76.6	75.3	4.5	7.93	8.05	3.6	6.42	6.54
88.9	80	3	89.5	88.0	5.0	10.30	10.50	4.0	8.36	8.53
114.3	100	4	115.0	113.1	5.4	14.50	14.80	4.5	12.20	12.50
139.7	125	5	140.8	138.5	5.4	17.90	18.40	5.0	16.60	17.10
165.1	150	6	166.5	163.9	5.4	21.30	21.90	5.0	19.80	20.40

For larger Install® Plus XL EN10255 sizes, please refer to our Inline™ product literature for full details.

Withdrawal of BS1387

Please ensure that any pipework specifications are updated to reference the correct standard, EN10255. Otherwise, there is a risk that you may be exposed to poor quality, non-compliant material.

Tubes to BS1387 were typically made to a strength level of 195MPa. Our multi-certified 'gaslist' tube has always been produced to a 235MPa minimum strength. Therefore, we are fully aligned with the new EN10255 S235GT grade.

Weld seam integrity

Install® Plus tube is subjected to a standard regime of non destructive and destructive testing to ensure specified properties are achieved.

For sizes \leq OD165.1mm weld seam integrity is demonstrated by both Eddy Current (EC to EN ISO10893-2) and Ultrasonic Test (UT to EN ISO10893-11).

Hydrostatic testing is used for sizes \geq OD 219.1mm (please refer to our manufacturing technical data sheet for full details).

Coating options

Install® Plus can be supplied coated with a new and improved Tata Steel Red paint, which delivers an enhanced corrosion resistance performance compared to previous transit protection coatings.

Galvanized tubes are supplied to EN10240 (qualities B.2 or A.1) or EN ISO1461 (please refer to the relevant technical datasheet for full details).

Extruded polymer and epoxy coatings are also available; please reference the relevant data sheet or contact us for additional details.

End finishes

Install® Plus tube is available with plain, grooved or screwed & socketed (taper/parallel joints) ends. All ends are square, and free from excessive burrs or projections.

Pressure ratings

The higher 235MPa strength of Install® Plus compared to the traditional 'gaslist' 195MPa provides greater pressure integrity and mechanical performance (please refer to our pressure ratings technical datasheet for full details).

Weight & cost savings

Our fully traceable 235MPa steel also provides the opportunity for cost and weight savings through using a stronger medium weight instead of a traditional 195MPa heavy thickness.

Application compatibility

Install® Plus tube is suitable for pipework conveying a wide range of gases and fluids etc. Please refer to our tube compatibility technical data sheet or contact one of our Customer Technical Services experts for additional information.

Tube mechanical suitability

Unlike some cold formed tube, Install® Plus hot-finished tube is suitable for threading, grooving, bending and flaring and is fully compatible with commercially available fittings.

Hot-finished advantages

These have no Heat Affected Zone (HAZ) at the weldline, are fully normalised, stress free, deliver improved ductility and have consistent mechanical properties when compared to cold formed tubes. Please refer to our mechanical suitability technical datasheet.

European Directives

Install® Plus products to EN10255 have been prepared in accordance with the Construction Products Regulations (CPR) (Regulation (EU) 305/11).

CE marking and DOP

Install® Plus tube is CPR-CE marked to both CAT3 (fuel, gas and air) and CAT4 (water), and has a Declaration of Performance (DOP) thereby satisfying the requirements of the CPR in full.



To obtain a copy of the DOP, please refer to our website, or contact one of our Customer Technical Services (CTS) experts.

Test certification

Install® Plus tube is subject to non-specific inspection and testing in accordance with EN10204 and can be supplied with either a 2.1 type Certificate of Compliance or a 2.2 test report if requested prior to manufacture.

A Tata Steel 2.2 test report shows the chemical composition (ladle analysis) of the steel supplied together with a tensile test result (yield strength, tensile strength and elongation) representative of the product.

Multi-certification

Install® Plus is manufactured in accordance with the new EN10255 S235GT requirements and also EN10217-2 P235GH, enabling harmonisation with the requirements of both the CPR and the PED.

As a result of our manufacturing and testing regimes we are therefore also able to refer to additional tube standards which are directly or generally equivalent, please refer to the relevant technical datasheet for full details.

Quality Assurance

Tata Steel operates a Quality Assurance system conforming to EN ISO9001 and Annex I clause 4.3 of Directive 2014/68/EC (the Pressure Equipment Directive, or PED).

Temperature range

Install® Plus tube is suitable for use from -20 to +300°C, and is supplied in accordance with EN10217-2, with guaranteed mechanical properties in accordance with Table 5 up to and including 300°C.

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