



CORUS

# INSTALL+™

## Dual certified (BS EN 10255 & 10217-1) Conveyance products from Corus Tubes

Our INSTALL+™ (BS EN 10255<sup>[1]</sup> & BS EN 10217-1<sup>[2]</sup>) tube has a wide variety of uses, including heating & ventilation, air conditioning, pressure systems and industrial conveyance. Recognised for its robustness and reliability, INSTALL+™ tube is the preferred choice for such applications.

INSTALL+™ tube is dual certified to satisfy installations in accordance with both the Construction Products Directive (CPD) and the Pressure Equipment Directive (PED) where applicable.

Choice of sizes from 15mm to 150mm nominal bore, heavy and medium weights.

### Install+™ tube offers many advantages:

- Rigid and structurally sound
- Thermal stability during typical operating conditions
- Fully killed steel resistant to strain ageing
- Choice of end finishes: Plain, pre-grooved or screwed & socketed
- Choice of surface finishes: Red-painted or galvanised
- Designated account managers and technical staff to provide support and assistance



### Summary of chemical composition (ladle analysis) and mechanical properties

Steel Grade	Chemical Composition %				Mechanical Properties		
	C	Mn	P	S	Upper Yield Strength R <sub>eH</sub> min (MPa)	Tensile Strength R <sub>m</sub> (MPa)	Elongation A min %
S195T/P195-TR1	max 0.13	max 0.70	max 0.025	max 0.020	195	320 to 520	27

### Tube data

Nominal Bore NB		Outside Diameter OD		Heavy Weight			Medium Weight		
				Wall Thickness T	Weight per metre		Wall Thickness T	Weight per metre	
					Plain end/ grooved tube	Screwed and socketed		Plain end/ grooved tube	Screwed and socketed
(mm)	(inch)	max (mm)	min (mm)	(mm)	(kg/m)	(kg/m)	(mm)	(kg/m)	(kg/m)
15	1/2	21.8	21.0	3.2	1.4	1.5	2.6	1.2	1.2
20	3/4	27.3	26.5	3.2	1.9	1.9	2.6	1.6	1.6
25	1	34.2	33.3	4.0	2.9	2.9	3.2	2.4	2.4
32	1 1/4	42.9	42.0	4.0	3.8	3.8	3.2	3.1	3.1
40	1 1/2	48.8	47.9	4.0	4.4	4.4	3.2	3.6	3.6
50	2	60.8	59.7	4.5	6.2	6.3	3.6	5.0	5.1
65	2 1/2	76.6	75.3	4.5	7.9	8.1	3.6	6.4	6.5
80	3	89.5	88.0	5.0	10.3	10.5	4.0	8.4	8.5
100	4	115.0	113.1	5.4	14.5	14.8	4.5	12.2	12.5
125	5	140.8	138.5	5.4	17.9	18.4	5.0	16.6	17.1
150	6	166.5	163.9	5.4	21.3	21.9	5.0	19.8	20.4

## General

INSTALL+™ tube can be supplied red-painted, or galvanized to BS EN 10240<sup>[3]</sup> (qualities B.2 or A.1)/BS EN ISO 1461<sup>[4]</sup>.

INSTALL+™ tube is supplied with the internal weld bead either height controlled or completely removed (depending on product size and process route). Where the bead is present, the maximum height of the internal bead is ≤1.5mm or 60% max of the nominal wall thickness, whichever is smaller. Please contact one of our technical staff for additional details.

## End finishes

INSTALL+™ tube can be supplied with plain (frazed), pre-grooved or screwed & socketed (taper/parallel joints) ends.

## Leak tightness

INSTALL+™ tube is eddy current tested, in accordance with BS EN 10246-1<sup>[5]</sup>.

## Pressure ratings

Please refer to our 'Pressure Ratings' Datasheet for guidance or contact one of our technical staff for additional information.

## Tube compatibility with conveyance mediums

Please refer to our 'Tube Compatibility' Datasheet for guidance or contact one of our technical staff for additional information.

## Tube mechanical suitability (bending, threading etc)

Please refer to our 'Mechanical Suitability' Datasheet for guidance or contact one of our technical staff for additional information.

## Test Certification

INSTALL+™ tube is subject to non-specific inspection and testing in accordance with BS EN 10021<sup>[6]</sup> and can be supplied with either a 2.1 type Certificate of Compliance or a 2.2 Test Report in accordance with BS EN 10204<sup>[7]</sup> if requested prior to manufacture.

A Corus 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.

## Compliance with European directives and dual certification of INSTALL+™ products

BS EN 10255<sup>[1]</sup> has been prepared in accordance with the Construction Products Directive (CPD) (89/106/EEC)<sup>[8]</sup> and Mandate M/131<sup>[9]</sup>.

Corus Tubes operates a Quality Assurance system conforming to BS EN ISO 9001<sup>[10]</sup> and Annex I clause 4.3 of Directive 93/23/EC (the Pressure Equipment Directive, or PED).<sup>[11]</sup> For applications where the PED applies, Corus Tubes had previously recommended the use of pressure tube in accordance with BS EN 10217, which carries a presumption of conformity with Directive 93/23/EC. This presented end users with a particular issue in that BS EN 10255<sup>[1]</sup> products are not harmonised with the PED and BS EN 10217 products are not harmonised with the CPD. Therefore, INSTALL+™ tube addresses this particular issue by providing one product, with dual certification of both BS EN 10255<sup>[1]</sup> and BS EN 10217-1<sup>[2]</sup> enabling harmonisation with the requirements of both the construction products and pressure equipment directives (where applicable).

INSTALL+™ tube is supplied in accordance with BS EN 10217-1<sup>[2]</sup> with guaranteed elevated property performance in accordance with Table 5 of BS EN 10217-2<sup>[12]</sup> up to and including 260°C.

## References

- [1] BS EN 10255: 2004-A1: 2007 Non-alloy steel tubes suitable for welding and threading. Technical delivery conditions.
- [2] BS EN 10217-1: 2002-A1: 2006 Welded steel tubes for pressure purposes. Technical delivery conditions. Part 1: Non-alloy steel tubes with specified room temperature properties.
- [3] BS EN 10240: 1998 Internal and/or external protective coatings for steel tubes. Specification for hot dip galvanized coatings applied in automatic plants
- [4] BS EN ISO 1461: 2009 Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods
- [5] BS EN 10246-1: 1996 Non-destructive testing of steel tubes. Part 1: Automatic electromagnetic testing of seamless and welded (except submerged arc welded) ferromagnetic steel tubes for verification of hydraulic leak-tightness.
- [6] BS EN 10021: 2006 General technical delivery requirements for steel products
- [7] BS EN 10204: 2004 Metallic materials. Types of inspection documents.
- [8] European Directive 89/106/EEC relating to construction products.
- [9] Mandate to CEN and CENELEC for standardisation work on harmonised standards.
- [10] BS EN ISO 9001: 2008 Quality management systems requirements.
- [11] European Directive 97/23/EC concerning pressure equipment.
- [12] BS EN 10217-2: 2002-A1: 2006 Welded steel tubes for pressure purposes. Technical delivery conditions. Part 2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties.

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