



Declaration of Performance

(according to Regulation EU No 305/2011)

Unique ID code TSNT TT420MLH [Grade S420MLH / 1.8848]

Harmonised standard EN 10219-1:2006 - Cold formed welded structural hollow sections of non-alloy and fine grain steels - Part 1: Technical delivery conditions (issued on the Official Journal of the European Union on 01/02/2007)

Intended use To be used in metal structures or in composite metal and concrete structures. This product is supplied with a specific inspection document 3.1 (according to EN 10204) that includes the full length non-destructive testing of the weld (as defined in table 2 of EN 10219-1). This product is suitable for being used as constituent product of a steel structure according to EN 1090. Table 1 of EN 1090-2:2018 requires a 3.1 inspection document for structural steel above S275.

Manufacturer TATA STEEL NEDERLAND TUBES BV
Registered in Netherlands No. 20022812
Registered office: Souvereinstraat 35, Oosterhout, 4903 RH, Netherlands
Website: www.tatasteelnederland.com

System of AVCP System of assessment and verification of constancy of performance of the product
System 2+ (FPC Certificate No: 0343/CPR/RQA2007001/A)

Notified body Notified body No. 0343
LRQA Nederland B.V.
George Hintzenweg 77
3068 AX Rotterdam
Netherlands

Jacob Gerkema
Managing Director
Tata Steel Nederland Tubes B.V.
Souvereinstraat 35, Oosterhout, 4903 RH
Netherlands

Date 09/01/2025

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Table 1 – Essential characteristics and declared performances

Essential characteristic	Performance		Harmonised technical specification	
	Nominal thickness (mm)	Value min (MPa)		
Yield strength	≤ 16	420	EN 10219-1: 2006	
	Nominal thickness (mm)	Values (MPa)		
Tensile strength	≤ 16	min 500 max 660		
	Nominal thickness (mm)	min max		
Elongation	≤ 16	Value min (%) long. 19 (17 where Table B.5, Note a applies)		
	Nominal thickness (mm)	Value min (%)		
Impact strength (longitudinal)	Grade	Impact Value min. average (J) at Test Temp (°C)		
	Nom. Thk. (mm)			
Weldability (CEV)	MLH	27J at - 50°C		
	Nominal thickness (mm)	Value max (%)		
Durability	≤ 16	0.43		
	Nominal thickness (mm)	Composition (cast) (max. unless otherwise shown)		
	≤ 16	C: 0.16 V: 0.12 Si: 0.50 Al: 0.020 min. Mn: 1.70 Ti: 0.050 P: 0.030 Ni: 0.30 S: 0.025 Mo: 0.20 Nb: 0.050 N: 0.020		
		FF deoxidation (a)		
Durability is also dependent on any method of protection subsequently applied and the type and thickness of the coating				
Tolerances on dimensions and shape	Rectangular sections		Circular sections	
	Outside dimensions	H, B < 100 mm	0.5% min. = 0.25 mm (b)	± 0.5% min. = ± 0.25 mm max. = ± 5 mm (b)
		H, B ≤ 200 mm	0.4% (b)	
		H, B > 200 mm	0.3% (b)	
	Thickness	EN 10219-2 (c)	EN 10219-2 (c)	
	Out-of-roundness (for D/T < 100)	Not applicable	1% (b)	
	Concavity/convexity	0.4 % min. = 0.25 mm (b)	Not applicable	
	Squareness of side	90° ± 0.5° (b)	Not applicable	
	External corner profile	T ≤ 6.0	2T ± 0.2T (or 1.8T to 2.2T) (b)	Not applicable
		6.0 < T ≤ 10.0	2.5T ± 0.25T (or 2.25T to 2.75T) (b)	
		T > 10.0	3T ± 0.3T (or 2.7T to 3.3T) (b)	
		T > 10.0	3T ± 0.3T (or 2.7T to 3.3T) (b)	
	Twist	EN 10219-2 (c)	Not applicable	
Straightness	EN 10219-2 (c)	EN 10219-2 (c)		
Mass per unit length	EN 10219-2 (c)	EN 10219-2 (c)		
Length	EN 10219-2 (c)	EN 10219-2 (c)		

Notes:

- (a) FF – Fully killed steel containing nitrogen binding elements
- (b) The declared tolerance is half of the maximum allowed by EN 10219-2:2006
- (c) The declared tolerance is the maximum allowed by EN 10219-2:2006



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EN 10219-1:2006

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Performance declared for the following essential characteristics:

Yield strength: 420 MPa

Tensile strength: 500 – 660 MPa

Elongation: 19% (17% where Table B.5.a applies)

Impact strength: 27J at - 50°C

Weldability (CEV): 0.43%

Durability: See Declaration of Performance

Tolerances on dimensions and shape: See Declaration of Performance

Dangerous Substances: No Performance Determined (NPD)



Declaration of Performance

(according to The Construction Products (Amendment etc.) (EU Exit) Regulations SI 2020-1359)

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 Approved body Approved body No. 0038 LRQA Verification Ltd. 1 Trinity Park, Bickenhill Lane Solihull, West Midlands Birmingham B37 7ES United Kingdom

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	≤ 16	0.43		
Durability	Nominal thickness (mm)	Composition (cast) (max. unless otherwise shown)	EN 10219-1: 2006	
	≤ 16	C: 0.16 V: 0.12 Si: 0.50 Al: 0.020 min. Mn: 1.70 Ti: 0.050 P: 0.030 Ni: 0.30 S: 0.025 Mo: 0.20 Nb: 0.050 N: 0.020 GF deoxidation (a)		
Durability is also dependent on any method of protection subsequently applied and the type and thickness of the coating				
Tolerances on dimensions and shape	Rectangular sections		Circular sections	
	Outside dimensions	H, B < 100 mm	0.5% min. = 0.25 mm (b)	± 0.5% min. = ± 0.25 mm max. = ± 5 mm (b)
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