

Declaration of Performance (according to Regulation EU No 305/2011)

Unique ID code TST Celsius420NH [Grade S420NH / 1.8750]

Harmonised standard EN 10210-1:2006 - Hot finished 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 10210-1). 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 UK LIMITED
Registered in England No. 2280000
Registered office: 18 Grosvenor Place, London, SW1X 7HS, UK
Website : www.tatasteelurope.com

Authorised representative Simon Edwards – Technical Director (acting)
Tata Steel
Wenckebachstraat 1
Velsen Noord 1951 JZ NL
PO Box 10.000
IJmuiden
1970 CA NL

System of AVCP System of assessment and verification of constancy of performance of the product
System 2+ (FPC Certificate No: 0343/CPR/LRQ0840080/A)

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



Richard Sidebottom
Director Mills, DSO & Technical

Date 01/04/2024

Table 1 – Essential characteristics and declared performances

Essential characteristic	Performance		Harmonised technical specification
Yield strength	Nominal thickness (mm)	Values Min (MPa)	EN 10210-1:2006
	≤ 16	420	
	> 16 ≤ 40	400	
	> 40 ≤ 65	390	
Tensile strength	Nominal thickness (mm)	Values (MPa)	
	≤ 65	min	
		max	
Elongation	Nominal thickness (mm)	Values min (%)	
longitudinal	≤ 65	19	
transverse		17	
Impact strength (longitudinal)	Grade	Nom. Thk. (mm)	Impact Value min. average (J) at Test Temp (°C)
	NH	≤ 65	40J at - 20°C (a)
Weldability (CEV)	Nominal thickness (mm)	Values max (%)	
	≤ 16	0.45 (b)	
	> 16 ≤ 65	0.45 (c)	
Durability	Nominal thickness (mm)	≤ 65	Composition (cast) (max. unless otherwise shown)
			C 0.22
	Si 0.14 – 0.25		
	Mn 1.00 – 1.70		
	P 0.035		
	S 0.030		
	Nb 0.050		
	V 0.20		
	Al 0.020 min.		
	Ti 0.03		
Cr 0.30			
Ni 0.80			
Mo 0.10			
Cu 0.70			
N 0.025			
			GF deoxidation (d)
	The product is suitable for hot dip galvanizing according to EN ISO 1461:2009 and fulfils the conditions of Category B of EN ISO 14713-2:2020		
Tolerances on dimensions and shape	Round, square, rectangular and elliptical hollow sections	In accordance with EN 10210-2: 2006	
Notes: (a) Value for 10 x 10mm specimen; 10 x 7.5mm specimen = 30J; 10 x 5mm specimen = 20J (b) Declared performance is below the maximum allowed by the standard (0.50) (c) Declared performance is below the maximum allowed by the standard (0.52) (d) GF – Fully killed fine grain steel containing nitrogen binding elements			



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EN 10210-1:2006

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Performance declared for the following essential characteristics:

Yield strength: 420 MPa (≤ 16 mm)

Tensile strength: 520 – 680 MPa

Elongation: 19%

Impact strength: 40J at - 20°C

Weldability (CEV): 0.45%

Durability: See Declaration of Performance

Tolerances on dimensions and shape: In accordance with EN 10210-2: 2006

Dangerous Substances: No Performance Determined (NPD)

Declaration of Performance

(according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 No 1359)

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System of AVCP	System of assessment and verification of constancy of performance of the product System 2+ (FPC Certificate No: 0038/CPR/LRQ0840080/A)
Approved body	Approved body No. 0038 LRQA Verification Limited 1 Trinity Park, Bickenhill Birmingham, B37 7ES UK

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Date 01/04/2024