



Declaration of Performance

(according to Regulation EU No 305/2011)

Unique ID code Forcon® 420MH [Grade S420MH / 1.8847]

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.

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

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Jacob Gerkema

Managing Director

Tata Steel Nederland Tubes B.V.
Souvereinstraat 35, Oosterhout, 4903 RH
Netherlands

Date 04/09/2025

Table 1 – Essential characteristics and declared performances

Essential characteristic	Performance		Harmonised technical specification	
Yield strength	Nominal thickness (mm)	Values min (MPa)	EN 10219-1:2006	
	≤ 16	420		
Tensile strength	Nominal thickness (mm)	Values (MPa)	EN 10219-1:2006	
	≤ 16	min 500 max 660		
Elongation	Nominal thickness (mm)	Values min (%)	EN 10219-1:2006	
	≤ 16	long. 19 (17 where Table B.5, Note a applies)		
Impact strength (longitudinal)	Grade	Nom. Thk. (mm)	EN 10219-1:2006	
	MH	≤ 16		
Weldability (CEV)	Nominal thickness (mm)	Impact Value min. average (J) at Test Temp (°C)	EN 10219-1:2006	
	≤ 16	40J at - 20°C		
Durability	Nominal thickness (mm)	Values max (%)	EN 10219-1:2006	
	≤ 16	0.43		
Durability	Nominal thickness (mm)	Composition (cast) (max. unless otherwise shown)	EN 10219-1:2006	
	≤ 16	C 0.16 Si 0.50 Mn 1.70 P 0.035 S 0.030 Nb 0.050 V 0.12 Al 0.020 min. Ti 0.050 Ni 0.30 Mo 0.20 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	Round, square and rectangular hollow sections	In accordance with EN 10219-2:2006		

Notes:

(a) GF – Fully killed steel containing nitrogen binding elements



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TATA STEEL NEDERLAND TUBES BV
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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: 40J at - 20°C

Weldability (CEV): 0.43%

Durability: See Declaration of Performance

Tolerances on dimensions and shape: In accordance with EN 10219-2:2006

Dangerous Substances: No Performance Determined (NPD)



Declaration of Performance

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

Unique ID code Forcon® 420MH [Grade S420MH / 1.8847]

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Website: www.tatasteelnederland.com

System of AVCP System of assessment and verification of constancy of performance of the product System 2+ (FPC
Certificate No: 0038/CPR/RQA20070001/A)

Approved body Approved body No. 0038
LRQA Verification Ltd.
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Date 04/09/2025

Table 1 – Essential characteristics and declared performances

Essential characteristic	Performance		Harmonised technical specification
	Nominal thickness (mm)	Values min (MPa)	
Yield strength	≤ 16	420	EN 10219-1:2006
	≥ 16		
Tensile strength	Nominal thickness (mm)	Values (MPa)	EN 10219-1:2006
	≤ 16	min 500 max 660	
Elongation	Nominal thickness (mm)	Values min (%)	EN 10219-1:2006
	≤ 16	19 (17 where Table B.5, Note a applies)	
Impact strength (longitudinal)	Grade	Nom. Thk. (mm)	EN 10219-1:2006
	MH	≤ 16	
Weldability (CEV)	Nominal thickness (mm)	Impact Value min. average (J) at Test Temp (°C)	EN 10219-1:2006
	≤ 16	40J at -20°C	
Durability	Nominal thickness (mm)	Values max (%)	EN 10219-1:2006
	≤ 16	0.43	
Durability	Nominal thickness (mm)	Composition (cast) (max. unless otherwise shown)	EN 10219-1:2006
	≤ 16	C 0.16 Si 0.50 Mn 1.70 P 0.035 S 0.030 Nb 0.050 V 0.12 Al 0.020 min. Ti 0.050 Ni 0.30 Mo 0.20 N 0.020	
Durability		GF deoxidation (a)	EN 10219-1:2006
		Durability is also dependent on any method of protection subsequently applied and the type and thickness of the coating	
Tolerances on dimensions and shape	Round, square and rectangular hollow sections	In accordance with EN 10219-2:2006	EN 10219-1:2006

Notes:
(a) GF – Fully killed steel containing nitrogen binding elements

 0038	<p>TATA STEEL NEDERLAND TUBES BV Registered in Netherlands No. 20022812 Registered office: Souvereinstraat 35, Oosterhout, 4903 RH, Netherlands 25 Forcon® 420MH [Grade S420MH / 1.8847]</p>
	<p>EN 10219-1:2006</p> <p>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.</p> <p>Performance declared for the following essential characteristics:</p> <p>Yield strength: 420 MPa Tensile strength: 500 – 660 MPa Elongation: 19% (17% where Table B.5.a applies) Impact strength: 40J at - 20°C Weldability (CEV): 0.43% Durability: See Declaration of Performance Tolerances on dimensions and shape: In accordance with EN 10219-2:2006</p> <p>Dangerous Substances: No Performance Determined (NPD)</p>