

Our order No.: (A08) 2380861 Your order No.: (A07) 41531 Order registration date: 07.02.2022 Date of dispatch: 22.04.2022 B

Material requirements and customer information

Product: <small>(A03)</small> Plate	Steel standard and grade: <small>(B02)</small> EN10025-2:2019 S355K2	Surface tolerance: EN 10163-2 B3
Delivery condition: <small>(B04)</small> Furnace normalized (N)		Length tolerance: EN 10029 Table 3
Customer name and address <small>(A06)</small> 4202 Oy AluSteel AB TELAKKATIE 4 23500 UUSIKAUPUNKI Finland	Certificate address 4202001 osto@alusteel.fi Finland OSTO@ALUSTEEL.FI;a.faktarauskas@eu.nlmk.com	Width tolerance: EN 10029 Table 2 Thickness tolerance: EN 10029 Class B Flatness tolerance: EN 10029 Table 4 Class N

Supplementary information: (C04)

Fully Killed and Fine Grain
 Plates <= 25mm are Normalised at 900°C for 3 minutes.
 Plates > 25mm are Normalised at 900°C for 5 minutes.

Visual examination and dimensional checking: Satisfactory. The results of tests performed are in compliance with the requirements. (Z01)

Details of supplied materials dimensions, weights and pieces

Heat/Slab <small>(B07)</small>	Plate No. <small>(B06)</small>	Item	Thickness mm <small>(B09)</small>	Width mm <small>(B10)</small>	Length mm <small>(B11)</small>	Pieces <small>(B08)</small>	Gross kg <small>(B12)</small>	Hard stamp	Stamp location	Customer remark <small>(B99)</small>
61190D3	8112N	16	55.0	2000	6000	2	10 362	S355K2+N	Head	41531 AluSteel
61033D2	9218M	16	55.0	2000	6000	1	5 181	S355K2+N	Head	41531 AluSteel
60716C1	3660N	19	50.0	2000	6000	2	9 420	S355K2+N	Head	41531 AluSteel
58268C5	3866N	19	50.0	2000	6000	2	9 420	S355K2+N	Head	41531 AluSteel
60715E3	3628N	20	60.0	2000	6000	1	5 652	S355K2+N	Head	41531 AluSteel
60715E2	3629N	20	60.0	2000	6000	2	11 304	S355K2+N	Head	41531 AluSteel
60715E1	3630N	20	60.0	2000	6000	2	11 304	S355K2+N	Head	41531 AluSteel
60715A3	3632N	20	60.0	2000	6000	2	11 304	S355K2+N	Head	41531 AluSteel
60715A1	3633N	20	60.0	2000	6000	2	11 304	S355K2+N	Head	41531 AluSteel

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Details of supplied materials dimensions, weights and pieces

Heat/Slab <small>(B07)</small>	Plate No. <small>(B06)</small>	Item	Thickness <small>mm (B09)</small>	Width <small>mm (B10)</small>	Length <small>mm (B11)</small>	Pieces <small>(B08)</small>	Gross <small>kg (B12)</small>	Hard stamp	Stamp location	Customer remark <small>(B99)</small>
60715A2	3634N	20	60.0	2000	6000	2	11 304	S355K2+N	Head	41531 AluSteel
60833A3	3699N	22	150.0	2000	4100	1	9 656	S355K2+N	Head	41531 AluSteel
61013A4	3716N	22	150.0	2000	4100	1	9 656	S355K2+N	Head	41531 AluSteel
						20	115 867			

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Chemical composition (heat analysis) all results in %

Heat No. <small>(B07)</small>	C	Mn	Si	P	S	Cr	Cu	Ni	Mo	Al	Nb	V	Ti	N	B
Set values:	min.									0.020					
	max.	0.22	1.60	0.55	0.025	0.025	0.290	0.400	0.300	0.080	0.100	0.060	0.100	0.050	0.0120 0.0008
58268	0.11	1.55	0.33	0.008	0.002	0.031	0.222	0.226	0.028	0.042	0.022	0.002	0.001	0.0034	0.0002
60715	0.15	1.46	0.38	0.015	0.003	0.021	0.015	0.009	0.001	0.044	0.036	0.001	0.001	0.0031	0.0002
60716	0.14	1.51	0.39	0.013	0.003	0.039	0.040	0.027	0.003	0.043	0.037	0.001	0.001	0.0032	0.0003
60833	0.18	1.51	0.37	0.009	0.003	0.038	0.044	0.025	0.006	0.035	0.036	0.002	0.001	0.0047	0.0002
61013	0.18	1.50	0.34	0.008	0.003	0.040	0.047	0.032	0.005	0.042	0.032	0.001	0.001	0.0036	0.0004
61033	0.19	1.44	0.35	0.013	0.002	0.039	0.056	0.028	0.003	0.042	0.019	0.001	0.002	0.0040	0.0004
61190	0.18	1.50	0.34	0.016	0.004	0.046	0.046	0.015	0.007	0.042	0.033	0.001	0.001	0.0032	0.0003

Heat No. <small>(B07)</small>	CEV	Remark <small>(C70)</small>
Set values:	min.	
	max.	0.47
58268	0.41	1 3 4 5 6
60715	0.40	1 3 4 5 6
60716	0.41	1 3 4 5 6
60833	0.44	1 3 4 5 6
61013	0.44	1 3 4 5 6
61033	0.44	1 3 4 5 6
61190	0.44	1 3 4 5 6

Supplementary information (C99)

 $CEV = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15$

1 = Basic Oxygen Steel, 2 = Electric Arc Furnace, 3 = Ladle Refined, 4 = Calcium Treated, 5 = Vacuum Degassed, 6 = Continuous Cast, 7 = Ingot

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Tensile testing

Tensile tests were performed in accordance with EN 10002/ISO 6892-1 with results as stated below:

Heat/slab <small>(B07)</small>	Plate ID <small>(B06)</small>	Thickness mm	Shape <small>(C10)</small>	Loc. <small>(C01)</small>	Dir. <small>(C02)</small>	Yield MPa <small>(C11)</small>	Yield type	UTS Rm MPa <small>(C12)</small>	Elong. type	Elongation % <small>(C13)</small>	Yield/UTS
60715E3	3628N-1-1	60.0	R	H	T	350	REH	504	A5	30	0.69
60715E2	3629N-1-1	60.0	R	H	T	350	REH	504	A5	30	0.69
60715E2	3629N-1-2	60.0	R	H	T	350	REH	504	A5	30	0.69
60715E1	3630N-1-1	60.0	R	H	T	352	REH	510	A5	32	0.69
60715E1	3630N-1-2	60.0	R	H	T	352	REH	510	A5	32	0.69
60715A3	3632N-1-1	60.0	R	H	T	350	REH	504	A5	30	0.69
60715A3	3632N-1-2	60.0	R	H	T	350	REH	504	A5	30	0.69
60715A1	3633N-1-1	60.0	R	H	T	350	REH	504	A5	30	0.69
60715A1	3633N-1-2	60.0	R	H	T	350	REH	504	A5	30	0.69
60715A2	3634N-1-1	60.0	R	H	T	350	REH	504	A5	30	0.69
60715A2	3634N-1-2	60.0	R	H	T	350	REH	504	A5	30	0.69
60716C1	3660N-1-1	50.0	R	H	T	381	REH	531	A5	31	0.72
60716C1	3660N-1-2	50.0	R	H	T	381	REH	531	A5	31	0.72
60833A3	3699N-1-1	150.0	R	H	T	339	REH	516	A5	30	0.66
61013A4	3716N-1-1	150.0	R	H	T	330	REH	516	A5	30	0.64
58268C5	3866N-1-1	50.0	R	H	T	361	REH	496	A5	30	0.73
58268C5	3866N-1-2	50.0	R	H	T	361	REH	496	A5	30	0.73
61190D3	8112N-1-1	55.0	R	H	T	359	REH	538	A5	32	0.67
61190D3	8112N-1-2	55.0	R	H	T	359	REH	538	A5	32	0.67
61033D2	9218M-1-2	55.0	R	H	T	340	REH	520	A5	32	0.65

Supplementary Information (C99)

Loc.: (C01) H = head, T = tail

Dir.: (C02) T = transversal, L = longitudinal

Shape: (C10) Ø = round, R = rectangular

Original gauge length: 200 mm

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Impact testing

Impact tests were performed in accordance with EN 10045/ISO 148-1 with results as stated below:

Heat/slab <small>(B07)</small>	Plate ID <small>(B06)</small>	Position <small>(C01)</small>	Notch <small>(C40)</small>	Shape <small>(C41)</small>	Loc. <small>(C01)</small>	Dir. <small>(C02)</small>	Temp. °C <small>(C03)</small>	SV J <small>(C42)</small>	SV J <small>(C42)</small>	SV J <small>(C42)</small>	AV J <small>(C43)</small>
60715E3	3628N-1-1	1	CV	10x10	H	L	-20	272	198	274	248
60715E2	3629N-1-1	1	CV	10x10	H	L	-20	272	198	274	248
60715E2	3629N-1-2	1	CV	10x10	H	L	-20	272	198	274	248
60715E1	3630N-1-1	1	CV	10x10	H	L	-20	228	276	221	242
60715E1	3630N-1-2	1	CV	10x10	H	L	-20	228	276	221	242
60715A3	3632N-1-1	1	CV	10x10	H	L	-20	272	198	274	248
60715A3	3632N-1-2	1	CV	10x10	H	L	-20	272	198	274	248
60715A1	3633N-1-1	1	CV	10x10	H	L	-20	272	198	274	248
60715A1	3633N-1-2	1	CV	10x10	H	L	-20	272	198	274	248
60715A2	3634N-1-1	1	CV	10x10	H	L	-20	272	198	274	248
60715A2	3634N-1-2	1	CV	10x10	H	L	-20	272	198	274	248
60716C1	3660N-1-1	1	CV	10x10	H	L	-20	277	262	208	249
60716C1	3660N-1-2	1	CV	10x10	H	L	-20	277	262	208	249
60833A3	3699N-1-1	1	CV	10x10	H	L	-20	122	131	150	134
61013A4	3716N-1-1	1	CV	10x10	H	L	-20	164	149	160	158
58268C5	3866N-1-1	1	CV	10x10	H	L	-20	345	325	311	327
58268C5	3866N-1-2	1	CV	10x10	H	L	-20	345	325	311	327
61190D3	8112N-1-1	1	CV	10x10	H	L	-20	175	152	208	178
61190D3	8112N-1-2	1	CV	10x10	H	L	-20	175	152	208	178
61033D2	9218M-1-2	1	CV	10x10	H	L	-20	183	181	176	180

Supplementary Information (C99)

Position: (C01) 1 = surface, 2 = middle, 3 = 1/3 of thickness, 4 = 1/4 of thickness

Notch: (C40) CU = Charpy U-notch, CV = Charpy V-notch, CVA = Charpy V-notch (ASTM)

Loc.: (C01) H = head, T = tail

Dir.: (C02) T = transversal, L = longitudinal

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We hereby certify that the material has been made and tested in accordance with the mentioned specification(s).
Certified according to Construction Products Regulations (305/2011/EU) by TÜV NORD Systems GmbH (Notified Body Reg. No. 0045).
For Declaration of Performance please see www.DanSteel.dk and DoP number 010CPR2013-07-01.



TÜV-NORD 0045-CPR-0554
Year of initial inspection: 2005
Intended use: Welded, bolted and riveted structures.

Our products are Cobalt, Gold, Mercury free and are free of radioactive substances and do not exceed the clearing limit value of 100 Bg/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.
Manufactured in Denmark

Information description

acc. to EN 10168

A Commercial transactions and parties involved

- A01 Manufacturer's works
- A02 Type of inspection document
- A03 Document number
- A04 Manufacturer's mark
- A05 Originator of the inspection document
- A06 Customer consignee
- A07 Purchaser's order number and, where applicable, item number
- A08 Manufacturer's works order number
- A09 Customer article number
- A10 to A99 Supplementary information

B Description of Products

- B01 Product
- B02 Steel designation
- B03 Any supplementary requirements
- B04 Product delivery condition
- B05 Reference (heat) treatment of samples
- B06 Marking of the product
- B07 Identification of the product
- B08 Number of pieces
- B09 to B11 Product dimensions
- B12 Theoretical mass
- B13 Actual mass
- B14 to B99 Supplementary information

C Inspection

- C00 Identification of the sample
- C01 Location of the sample
- C02 Direction of the test pieces
- C03 Test temperature
- C04 to C09 Supplementary information

- C10 Shape of the test piece
- C11 Yield or proof strength
- C12 Tensile strength
- C13 Elongation after fracture
- C14 to C29 Supplementary information
- C30 Method of test
- C31 Individual values
- C32 Mean value
- C33 to C39 Supplementary information
- C40 Type of test piece
- C41 Width of test piece
- C42 Individual values
- C43 Mean value
- C44 to C49 Supplementary information
- C50 to C69 Supplementary information
- C70 Steelmaking process
- C71 to C92 Chemical composition
- C93 to C99 Supplementary information

D Other tests

- D01 Marking and identification, surface appearance, shape and dimensional properties
- D02 to D50 Non-destructive tests
- D51 to D99 Supplementary information

Z Validation

- Z01 Statement of compliance
- Z02 Date of issue and validation
- Z03 Stamp of the inspection representative
- Z04 CE marking
- Z05 to Z99 Supplementary information