ACME METALS

Manufacturer

ACME Metal Works GmbH

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quality@acme-metal.example.com

Customer

Bridge Constructors Europe Ltd.

Engineering Plaza 456
75001 Paris, FR
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Digital Material Passport

ID	DMP-METAL-007	*Version*	1.0.0
Issue Date	2025-05-20	*Certificate Type*	EN 10204 3.1

Business Transaction

Order		**Delivery**	
Order ID	PO-98765	*Delivery ID*	DN-12345
Position	5	*Position*	1
Date	2025-04-20	*Date*	2025-05-19
Quantity	20000 kg	*Quantity*	20000 kg

Product Information

Product Name	Structural Steel S420N Plate
Batch ID	H-45678-01
Heat Treatment	Normalized
Surface Condition	Shot blasted and primed
Production Date	2025-05-18
Country of Origin	DE

Product Norms

Designation	EN 10025-3 (2019)
Grade	S420N
Designation	EN 1090-2 (2018)
Grade	EXC3

Material Designations

System	EN
Designation	1.8902

Product Shape

Form	Plate
Length	12000 mm
Width	2500 mm
Thickness	25 mm

Chemical Analysis

Heat Number	H-45678
Melting Process	EAF+LF+VD
Casting Date	2025-05-17

Sample Location	Ladle

Elements

Symbol	C	Mn	Si	P	S	Nb	V	Ti	CEV
Unit	%	%	%	%	%	%	%	%	%
Min	-	1.0	-	-	-	-	-	-	-
Max	0.22	1.7	0.6	0.025	0.02	0.05	0.05	0.03	0.48
Actual	0.16	1.38	0.32	0.016	0.008	0.022	0.034	0.009	0.4

Formula Definitions

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

Mechanical Properties

Property	*Symbol*	*Actual*	*Minimum*	*Maximum*	*Method*	*Status*
Tensile Strength	Rm	550 MPa	520	680	EN ISO 6892-1	✓
Yield Strength	ReH	440 MPa	420		EN ISO 6892-1	✓
Elongation after fracture	A	21 %	19		EN ISO 6892-1	✓
Charpy V-notch Impact - Energy	KV	65 J	40		EN ISO 148-1	✓

Supplementary Tests

Property	*Actual*	*Target/Min*	*Maximum*	*Method*	*Status*
Ultrasonic Testing Class S2E2	Yes No recordable indications exceeding acceptance criteria	-		EN 10160	✓
Through-thickness Properties	Z25	-		EN 10164	✓
Weldability	Yes Satisfactory welding properties	-		Internal Method based on - EN ISO 15614-1	✓

Validation

We hereby certify that the material described above has been manufactured and tested in accordance with the requirements of EN 10025-3:2019 and EN 10204:2004 type 3.1. The product complies with the Construction Products Regulation (EU) No 305/2011 and is suitable for use in structural applications according to EN 1090-2:2018, up to and including Execution Class EXC3.

Validated By

Name	*Title*	*Department*	*Date*
John Smith	Quality Manager	Quality Assurance	2025-05-20
Maria Schmidt	Quality Manager	Quality Assurance	2025-05-20

Data schema maintained by Material Identity. https://schemas.materialidentity.org/metals-schemas/v0.0.1/schema.json