

Outershield® 500CT-H

Weather resistant rutile cored wire

Classification

AWS A5.29-98 : E81T1-G H4
EN 758-97 : T 50 5 Z P M 2 H5

General description

All position gas shielded 0.8% Ni and 0.4% Cu flux cored wire, for welding weather resistant steel (CorTen)
For welding in all positions
Superior weldability, low spatter, good bead appearance
Outstanding operator appeal
Exceptional mechanical properties (CVN >47J at -50°C)
Very low hydrogen H_{DM} <5ml/100g
Superior product consistency with optimal alloy control
Excellent wire feeding

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PG/3G down PE/4G

Current type/Shielding gas

DC +
Ar+ (>5-25)% CO₂ (EN 439: M21)
15-25 l/min

Approvals

Chemical composition (w%), typical, all weld metal

Shielding gas	C	Mn	Si	P	S	Ni	Cu	H _{DM} ml/100g
M21	0.05	1.3	0.2	0.014	0.010	0.84	0.4	<5

Mechanical properties, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V (J)	
						-40°C	-50°C
Required: AWS A5.29-98			min. 470	550-690	min. 19	min. 27	
EN 758-97			min. 500	560-720	min. 18	min. 47	
Typical values	M21	AW	580	610	23	80	

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)
		1.2
Plastic spool S200	4.5	X
Wire reel B300	15	X

Outershield® 500CT-H: rev. EN 15

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Materials to be welded

Steel	Code	Type
Weather resisting steel	EN 10155	S235 J0W
		S235 J2W
		S355 J0W
		S355 J2W
		S355 K2G1W

Weather resistant steels like: Cor-Ten®, Patinax®-F, Patinax®-37 and similar Ni- and Cu-alloyed steels

Calculation data

Diameter (mm)	Electrical Stick-out (mm)	Wire feed speed (cm/min)	Current (A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg weld metal
1.2	20	445	130	20-22	1.6	1.20
		700	180	23-25	2.5	1.20
		950	220	25-27	3.4	1.20
		1270	265	27-29	4.5	1.20
		1590	305	30-32	5.9	1.20

Welding parameters, optimum fill, shielding gas Ar + (>5 - 25)% CO₂

Diameter (mm)	Current/ Voltage	Welding position				
		PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G
1.2	(A)	230-280	230-280	200-240	200-240	160-220
	(V)	26-32	26-32	25-32	25-28	23-28

FCAW