

Outershield® 500CT-H

Weather resistant rutile cored wire

Classification

AWS A5.29/A5.29M : E81T1-9G-H4
EN ISO 17632-A : 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} <5 ml/100g)

Superior product consistency with optimal alloy control

Excellent wire feeding

For welding applications with higher service temperatures (i.e chimneys), Outershield 555CT-H is recommended.

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3Gup PE/4G

Current type/Shielding gas (ISO 14175)

DC +

M21 : Mixed gas Ar+ (>15-25%) CO₂

Amount : 15-25 l/min

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

Shielding gas	C	Mn	Si	P	S	Ni	Cu	H _{DM} ml/100g
M21	0.04	1.3	0.2	0.014	0.010	0.84	0.39	4

Mechanical properties, typical, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V (J) -50°C
Required: AWS A5.29			min. 470	550-690	min. 19	not required
EN ISO 17632-A			min. 500	560-720	min. 18	min. 47
Typical values	M21	AW	580	610	23	80

Packaging and available sizes

Unit type	Diameter (mm)
	1.2
4.5kg plastic spool S200	X
15 kg spool B300	X

Outershield® 500CT-H: rev. EN 24

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Materials to be welded

Steel grades/Standard Type

Weather resisting steels

EN 10025 part 5	S235 J0W, S235 J2W, S355 J0WP, S355 J2WP, S355 J0W, S355 J2W, S355 42W
ASTM A242	Type 1
ASTM A580	Grade A
ASTM A595	Grade C
ASTM A709	Grade HPS 50W & HPS 70W
ISO 5952	HSA 355W1 & W2

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 passes in shielding gas Ar + (>15 - 25)% CO₂

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

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request