

Outershield® 550-H

High strength rutile cored wire

Classification

AWS A5.29/A5.29M : E101T1-K3M-JH4
ISO 18276-A : T 55 4 Z P M 1 H5

General description

All position gas shielded rutile flux cored wire, for high strength steel grades for welding pipes and plates

Outstanding operator appeal

Excellent mechanical properties (CVN >50J at -40°C)

Very low hydrogen (H_{DM} <5 ml/100g)

Superior product consistency with optimal alloy control

Good wire feeding

Welding positions



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	Mo	H _{DM} ml/100g
M21	0.04	1.4	0.2	0.012	0.010	2.0	0.3	3

Mechanical properties, typical, all weld metal

Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V (J) -40°C
Required: AWS A5.29		min. 610	690-800	min.16	min. 27
ISO 18276-A		min. 550	640-820	min.18	min. 47
Typical values	M21 AW	700	730	19	60

Packaging and available sizes

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

Outershield® 550-H: rev. EN 23

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Materials to be welded

Steel grades/Standard Type

Pipe material

API 5LX X52, X60, X60, X65, X70, X80

Fine grained steel

EN 10025 part 6 S460Q, S460QL1, S500Q, S500QL1, S550Q, S550QL1

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	23-30V

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