

OUTERSHIELD® 101Ni-HSR

FCAW

LOW ALLOY STEELS

RUTILE MICRO ALLOYED FLUX-CORED WIRE FOR WELDING IN ALL POSITIONS

PRODUCT DESCRIPTION

Rutile micro alloyed flux-cored wire for welding in all positions, special of high carbon containing low alloy high strength steels such as SAE 4130
 Specific design for stress relieved applications
 Outstanding operator appeal
 Excellent mechanical properties (CVN >50J at -40°C)
 Superior product consistency with optimal alloy control
 Good wire feeding
 Meets NACE MR-0175 requirements

CLASSIFICATIONS

AWS A5.29 E101T1-G-H4

ASME IX QUALIFICATION

QW432 F-No -6
 QW442 A-No -11

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

CURRENT TYPE / SHIELDING GAS (ISO 14175)

DC +
 M21 : Mixed gas Ar + (>15-25%) CO₂
 Flow rate : 15-25 l/min

CHEMICAL COMPOSITION (WELD METAL WT %) - M21

	C	Mn	Si	P	S	Ni	Mo	HDM
min.	--	--	--	--	--	--	--	--
max.	--	0.5	1.0	0.03	0.02	0.5	0.2	--
Typical	0.06	2.0	0.3	0.013	0.010	0.95	0.4	3 ml/100 g

ALL-WELD MECHANICAL PROPERTIES

	Required: AWS A5.29	Typical values	
		AW	SR 645°C/4h
Tensile strength [MPa]	830	750	690
0.2% proof strength [MPa]	min. 610	810	780
Elongation [%]	min. 16	17	18
Impact ISO-V[U] -40°C	-	60	--
	-50°C	-	40

WELDING PARAMETERS, OPTIMUM FILL PASSES IN SHIELDING GAS Ar + (>15-25)% CO₂

Diameter (mm)	Welding positions				
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G
1.2	230-280A	230-280A	200-240A	200-240A	160-220A
	26-32V	26-32V	25-32V	25-28V	23-30V

PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
1.2	14	S300	ED034210N

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to www.specialalloys.eu for any updated information.