Product Data Sheet

Prepared by	Approved by	PDS No & Rev.	Issue Data.	Page
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Dual Shield Prime 81Ni1 M H4

Seamless FCAW wire for mild steel, 490N/mm^2 class high tensile steel and550N/mm^2 class high tensile steel for low temperature service

General

Dual Shield Prime 81Ni1 M H4 is a high strength all position seamless flux cored electrode for 75% Ar, 25% CO_2 shielding gas(M21) designed to provide excellent low temperature impact toughness.

Shielding Gas: M21

Alloy Type: C Mn Ni
Fill Type: Rutile

Classifications Weld Metal

ASME SFA/AWS A5.29 E81T1-Ni1M H4
ASME SFA/AWS A5.36 E81T1-M21A8-Ni1 H4
ISO 17632-A-T506-1Ni-P-M-1-H5
ISO 17632-B-T555T1-1MA-N2-U-H5

Approvals

ABS 5YQ460SA, H5
BV SA5Y46, H5
DNV VY46, H5
LR 5Y46 H5

Welding Parameters

Diameter	Position	Current (A) Range	Voltage (V) Range
1.2mm	Flat	140 ~ 320	22 ~ 32
	Vertical - up	140 ~ 270	22 ~ 28
1.4mm	Flat	160 ~ 330	23 ~ 34
	Vertical - up	150 ~ 280	22 ~ 28
1.6mm	Flat	180 ~ 340	24 ~ 35
	Vertical - up	160 ~ 290	22 ~ 28

*DC Electrode Positive (Reverse) Polarity, Electrical Stick out: 13 ~ 25mm

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Chemical Composition of Weld Metal

	All Weld Metal (%)		
	Min	Max	Typical
C	0.02	0.06	0.03
Si	0.25	0.70	0.29
Mn	1.00	1.50	1.34
P		0.025	0.012
S		0.025	0.006
Cr		0.2	0.036
Ni	0.8	1.10	0.96
Mo		0.2	0.004

Diffusible Hydrogen of Weld Metal

AWS A4.3

Max 4 ml/100gr

Mechanical Properties of Weld Metal

	All Weld Metal 75%Ar, 25%CO_2 Shielding Gas (M21)		
	As welded		
Properties	Min	Max	Typical
Yield Strength (MPa)	470		533
Tensile Strength (MPa)	550	690	587
Elongation (%)	22		28
CVN Impact Value (J)			
-40^{o}C			110
-60^{o}C			75

Standard Packaging

Diameter	Spool (Vacuum Pack)	Pail
1.2mm	12.5, 15kg	
1.4mm	12.5, 15kg	
1.6mm	12.5, 15kg	