



# Product Data Sheet

# Dual Shield Prime 71 LT H4

T 'Tubular cored electrode arc welding'

Prepared by Neil Farrow	Qualified by P-O Oskarsson	Approved by Neil Farrow	Reg no EN008795	Cancelling EN008760	Reg date 2019-10-14	Page 1 (2)
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## REASON FOR ISSUE

CWB approval added

## GENERAL

Seamless FCAW wire for mild steel and 490N/mm<sup>2</sup> class high tensile steel for low temperature service. Dual Shield Prime 71 LT H4 is a seamless flux cored electrode designed to provide low diffusible hydrogen amount (typically, 3~4ml/100g) of weld metal and a high strength all-position flux cored wire for use with Ar/CO<sub>2</sub> mixed or CO<sub>2</sub> shielding gas designed to provide low temperature impact toughness.

**Shielding Gas:** M21, C1 (EN ISO 14175)

**Polarity:** DC+

**Alloy Type:** C Mn

**Fill Type:** Rutile

**Diff Hydrogen:** < 4 ml/100g

## CLASSIFICATIONS Weld Metal

EN ISO 17632-B	T494T12 1C1A H5
EN ISO 17632-B	T494T12 1M21A H5
SFA/AWS A5.20	E71T-1C/1M/9C-J/9M-J
SFA/AWS A5.20	E71T-12C-J/12M-J-H4
SFA/AWS A5.36	E71T-C1/M21A4-CS2-H4
JIS Z 3313	T49 4 T1-1 C/M A-H5
KS D 7104	YFL-A503R/YFL-C503R
EN ISO 17632-A	T42 4 P C1 1 H5
EN ISO 17632-A	T42 4 P M21 1 H5

## APPROVALS

ABS	4Y400SA H5
CWB	E491T1-C1A4-CS2-H4 (E491T-12J-H4), E491T1-M21A4-CS2-H4 (E491T-12MJ-H4)
DNV-GL	IV Y40MS H5

## CHEMICAL COMPOSITION

### All Weld Metal (%)

	Min	Max
C	0.02	0.06
Si	0.30	0.50
Mn	1.00	1.50
P		0.025
S		0.025
Cr		0.2
Ni	0.35	0.5
Mo		0.2
V		0.08
Nb		0.05

## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Properties	M21 Shielding gas According to AWS			C1 Shielding gas According to AWS		
	As welded			As welded		
	Min	Max	Typ	Min	Max	Typ
Rp0.2 (MPa)	420		480	420		450
Rm (MPa)	500	620	540	500	620	525
A4 (%)	20		32	20		32
Charpy V at -30°C (J)			117			97
Charpy V at -40°C (J)	47		78	47		54



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### ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	$\eta$	H		Feed			U	
	Min	Max			Nom	Nom	Min	Max	Min	Max	Min
$\emptyset$ 1.2	170	310	20	87	2.5	6.2	6.0	16.5	25		35

**W** = Gas consumption (l / min)

**$\eta$**  = Recovery, g weld metal / 100g wire (%)

**H** = Deposit rate (kg weld metal / hour arc time)

**Feed** = Feeding rate (m/min)

**U** = Arc voltage (V)

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### OTHER DATA

CTOD test results:

Under CO<sub>2</sub> gas at 0 °C Ave. = 0.799mm and at -10 °C = 0.685mm

Under Ar/CO<sub>2</sub> gas at 0 °C Ave. = 0.893mm and at -10 °C = 0.864mm

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