



Product Data Sheet

S 'Submerged arc welding'

OK Tubrod 15.24S

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Daniel Amahatsion	P-O Oskarsson	Neil Farrow	EN010669	EN008713	2023-05-19	1 (2)

REASON FOR ISSUE

Approvals updated. UKCA approval added.

GENERAL

A 1% Ni basic cored wire for submerged arc welding giving good toughness down to -50 °C.

Alloy Type: Low alloy (1% Ni)

Fill Type: Basic

Diff Hydrogen: <5ml/100g

CLASSIFICATIONS Weld Metal

SFA/AWS A5.23	F7P8-EC-G (10.61)
SFA/AWS A5.23	F8A6-EC-G (10.62)
SFA/AWS A5.23	F8A6-EC-G (10.71)
EN ISO 14171-A	S 46 4 AB TZ (10.71)
EN ISO 14171-A	S 46 5 FB T3Ni1 (10.62)

APPROVALS

ABS	4YQ460M H5 (10.62)
BV	4Y46M H5 (10.62)
CE	EN 13479 (10.62)
CE	EN 13479 (10.71)
DNV-GL	IV Y46M(H5) (10.62)
UKCA	EN 13479 (10.71)

CHEMICAL COMPOSITION

All Weld Metal (%)

	with OK Flux 10.61		with OK Flux 10.62		with OK Flux 10.71	
	Min	Max	Min	Max	Min	Max
C	0.05	0.10	0.05	0.10	0.05	0.10
Si	0.10	0.40	0.10	0.40	0.30	0.70
Mn	1.50	2.00	1.50	2.00	1.80	2.30
P		0.025		0.025		0.025
S		0.025		0.025		0.025
Ni	0.60	0.90	0.60	0.90	0.60	0.90

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Standard	Condition	Rp0.2 [MPa/ksi]		Rm [MPa/ksi]			A4 [%]	
		Min	Typ	Min	Max	Typ	Min	Typ
AWS	As welded OK Flux 10.61	470/68		550/80	690/100		20	
AWS	As welded OK Flux 10.62	470/68	510/74	550/80	690/100	610/88	20	29
AWS	As welded OK Flux 10.71	470/68		550/80	690/100		20	

Comments:



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MECHANICAL PROPERTIES OF WELD METAL

Standard	Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
			Min	Typ
AWS	As welded OK Flux 10.61	-40/-40 -50/-58	47/35	
AWS	As welded OK Flux 10.62	-40/-40 -50/-58	47/35	106/78
AWS	As welded OK Flux 10.71	-40/-40 -50/-58	47/35	

Comments:

ECONOMICS & CURRENT DATA

Dimension	Current (A)		W	η	N	H			Feed			U		
	Min	Max				Min	Max	Nom	Min	Max	Nom	Min	Max	Nom
2.4 mm (3/32 in.)	250	500		85		3.5 kg/h (7.7 lb/h)	9.5 kg/h (20.9 lb/h)		1.5 m/min (59 in/min)	2.5 m/min (98 in/min)		28	38	
3.0 mm (0.118 in.)	400	800		85		6.0 kg/h (13.2 lb/h)	14.5 kg/h (32 lb/h)		2.5 m/min (98 in/min)	6.0 m/min (236 in/min)		28	40	
4.0 mm (5/32 in.)	500	900		85		7.0 kg/h (15.4 lb/h)	18.0 kg/h (39.7 lb/h)		2.0 m/min (79 in/min)	5.5 m/min (217 in/min)		28	40	

W = Gas consumption (l/min)

η = Filler metal efficiency (g weld metal x 100 / g wire)(%)

N = Deposition efficiency (g weld metal x 100 / g electrode)(%)

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

Feed = Wire feed speed (m/min)

U = Arc voltage (V)

OTHER DATA

The hydrogen values are determined according to the method given in ISO 3690.

Welding parameter for hydrogen determination: Wire diameter 4.0mm, 500 amps, 30 volts, 30mm stickout, DC + polarity with OK 10.62 flux